



Fashion Patternmaking Techniques [Vol. 1]

How to Make Skirts, Trousers and Shirts for Women and Men

Skirts / Culottes / Bodices and Blouses /
Men's Shirts and Trousers / Size Alterations

Antonio Donnanno

Illustrations by
Elisabetta Kuky Drudi

promopress

Fashion Patternmaking Techniques [Vol. 1]

Fashion Patternmaking Techniques [Vol. 1]

How to Make Skirts, Trousers and Shirts for Women and Men

Skirts / Culottes / Bodices and Blouses /
Men's Shirts and Trousers / Size Alterations

Antonio Donnanno

Illustrations by
Elisabetta Kuky Drudi

promopress

INTRODUCTION



CUT AND FASHION

Many believe that a cut is good when it has "a good line", one that reflects the trends in vogue at any given time. But to subordinate the validity of a cut to the requirements of line would mean continuously adjusting the method in order to keep abreast of the changes in fashion.

So, it makes you wonder: What is the real connection between cut and fashion?

The answer is that a cut must be understood in terms of its specific function, which is to cover the human figure while respecting its anatomical design and its physical constraints, and thus, it has a patently technical value.

The Line or Fashion is, instead, the outline, the silhouette or profile that alters from season to season, following the fickle aesthetic logic of *le nouveau pour l'amour du nouveau*; it becomes more pronounced year after year, and completes the cycle over the span of five years, to start over once again.

The cut, which, additionally, must serve to cover, is the fruit of rational technique, while the Line, which must clothe, is the aesthetic fruit of the times.

These are two quite separate virtues, one technical, the other aesthetic, which a clothing design technician must know particularly well, without, however, confusing them.

The elements that distinguish the cut and the line are obvious even from the most superficial observation. While a Line does not adapt to a single season or epoch, the Cut, instead, when it has solid technical foundations overall, respecting the different configurations of the human subjects, can and must be viable regardless of any whim of Fashion and Line.

The first draft of this cutting method dates from 1939, when Signora Carla Zenoni, a pattern maker and scholar in the field of pattern making, as well as successful sample maker, decided to pass on her vast experience to all those who wished to undertake a career in fashion design or dressmaking, establishing her own school of pattern cutting.

I picked up the baton in 1970, and took over the direction of the school, myself likewise carried away by a huge passion for fashion and clothing of all kinds.

This is how I made my first cutting book, with the precious contribution of my teacher, who was more meticulous and exacting than I am.

Since then, several editions have followed, ever improved and enhanced, while the school has changed hands for two generations.

This most recent edition was published in three volumes, keeping in mind the new needs of the labour market and the sector companies, and as a result, the professional requirements of the students, future technicians.

In particular, this flat pattern method describes, with simple, clear, and detailed illustrations all the basic patterns, as well as giving ample space to more creative designs to stimulate the student's and technicians' artistic veins.

Each phase of production is examined and discussed step-by-step to provide the student with a thorough knowledge of the procedures, allowing the flexibility required to create any type of pattern that fashion might propose.

The author

SUMMARY

CHAPTER ONE

PAG.9 "SARTORIAL TECHNICAL
KNOW-HOW"



CHAPTER TWO PAG.31 "SKIRTS"



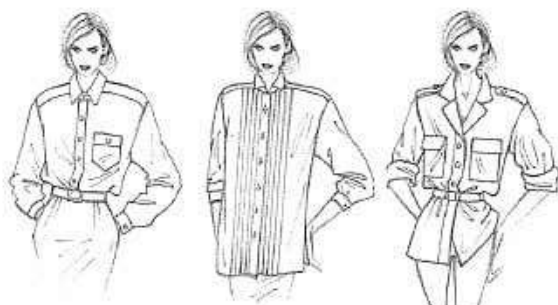
CHAPTER THREE

PAG.97 "CULOTTES, TROUSERS
AND OVERALLS"



CHAPTER FOUR

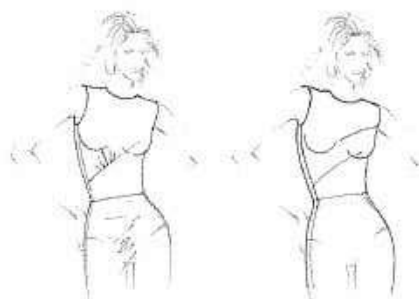
PAG.139 "BODICES AND BLOUSES"



CHAPTER FIVE PAG.167 "SHIRT COLLARS AND NECKLINES"



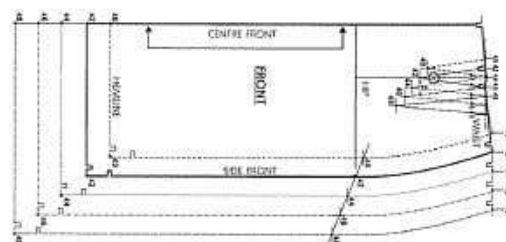
CHAPTER SIX PAG.199 "ALTERATIONS OF THE BODICE BLOCK"



CHAPTER SEVEN PAG.213 "MEN'S SHIRT AND TROUSERS"



CHAPTER EIGHT PAG.243 "SIZE GRADING"



SARTORIAL TECHNICAL KNOW-HOW



Tools and equipment	10
The fabric	13
The components of fabrics	14
Height of the fabric	15
The patterns	16
Pattern grainlines	17
Industrialization of the pattern	18
Pattern grading	19
Anatomy of the human figure	20
Proportions of the figure	21
The female figure	22
The hips and legs	23
Shoulders and back	24
The interpretation of the fashion sketch ..	25
Differences between the photo and the sketch	26
Dressmaker's glossary	27
Figure measurements	28
Industrial chart of women's measurements	29
Symbols and abbreviations	30

TOOLS AND EQUIPMENT

EQUIPMENT FOR PATTERN MAKING



1) Paper for patterns

Must be smooth and medium-weight. May be in sheets or rolls, but must be sturdy enough to stand up to repeated use and to show the line clearly.

2) Medium weight manila paper

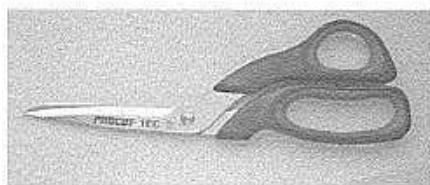
Used to cut out all the parts of the basic patterns.

3) Carbon paper

Used to "duplicate" and to retrace some pattern parts (trimmings, neckline edging, sleeveless armholes, etc.).

4) Paper scissors

Used for cutting out patterns without using fabric shears, which would be dulled.



5) Pencils with erasers

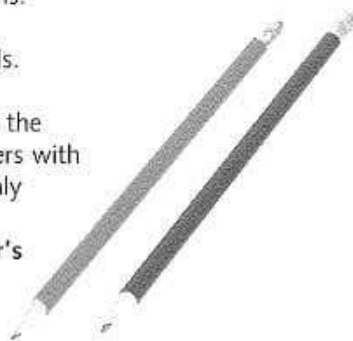
Used for tracing the patterns.

6) Coloured pencils

Used to highlight the details.

7) 80-100 cm ruler

Used to measure and draw the pattern's straight lines. Rulers with no-slip rubber strip are highly recommended.

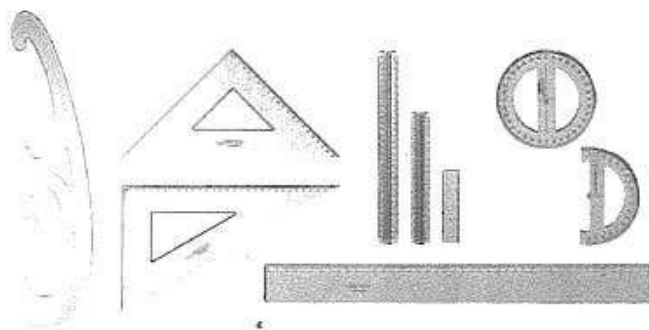


8) Large L-square (or Tailor's ruler)

Used to square off the edges, to mark the grain of the fabric, etc.

9) French curve

Used to connect curved lines or contoured seams.



10) Large compass

Used to draw sections of circles for $\frac{1}{4}$ or $\frac{1}{2}$ circle skirts, etc.

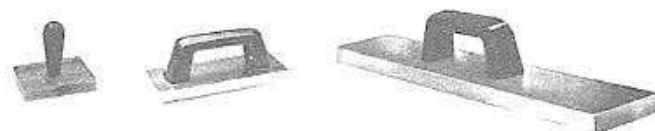
11) Tracing wheel

Used to transfer markings from one layer of the pattern to the other, especially when drawing cuffs and turn-ups. Also used to trace the assembly markings on the lining, on the interfacing and on lightweight fabrics with a smooth surface.



12) Weights

Used to hold the patterns in place during the first phase of design.



13) Adhesive tape

Used to anchor the pattern paper to the table, or to attach the pattern modifications.

14) Long ball head straight pins

Used to fasten the pattern to the fabric before cutting.

15) Pincushions

May be wrist or table model.

16) Table

Must be large enough to allow working on the patterns (110 x 200 cm).



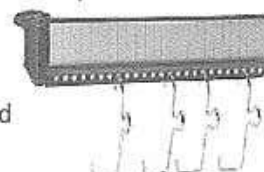
Computer digitizer

17) Pattern stand

Used for hanging up the patterns, all the parts assembled and fastened together.

18) Pattern notcher

Used for marking the notches or other reference points on cardboard patterns.



19) Paper punch

Used for punching the holes into the cardboard patterns for hanging them up.

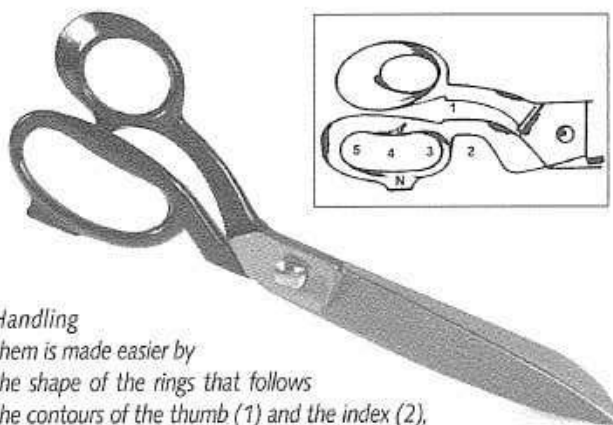
20) Perforator

Used for marking reference points on the patterns (darts, pockets).

EQUIPMENT FOR CUTTING AND ASSEMBLING

1) Cutter's shears

The shears used by pattern cutters may be as long as 50 cm, and weigh as much as 1 kg.



Handling them is made easier by the shape of the rings that follows the contours of the thumb (1) and the index (2), middle (3), ring (4) and little fingers. The centre of movement and of balance (N) provides support during the cutting process.

2) Sewing machinist's scissors

They are about 12 cm long, with both blades pointed; they are very sharp and used to trim and notch the edges.

3) Pinking shears

A special kind of scissors with sawtooth blades that cut in a zigzag pattern; used for all kinds of fabrics to limit fraying. They are also handy for softening or lightening the edges of iron-on interfacing.

4) Thread nippers

Particular kind of scissors used in dressmaking to shave off basting threads and the like.

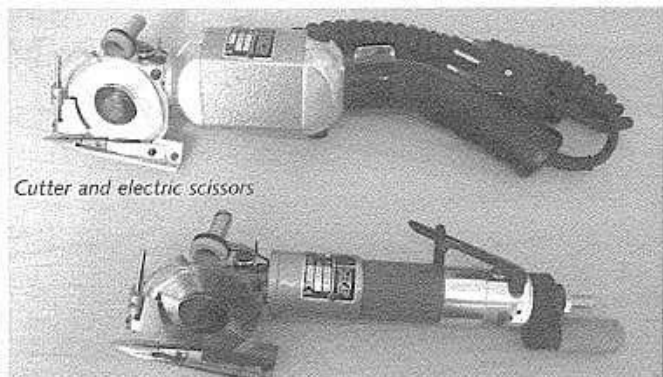
5) Buttonhole scissors



A kind of dressmaker's scissors used to make buttonholes, adjustable for the desired length.

6) Cardboard scissors

Used to trim the edges of cardboard patterns.



Cutter and electric scissors

7) Cutting table

The table used in the cutting room is composed of a metal structure with a surface in tempered hardboard over a supporting layer of chipboard. Cutting tables range in width from 110 to 200 cm; their height is about 1 m, and they may be equipped with a fabric feeding or spreading system.

8) Thimble

A small metal or bone cup with pitted surface used to protect the middle finger while sewing. Men's thimbles are open at the end, while women's provide complete coverage.



9) Mirror

May have one or three panels. It is a must throughout the process of producing a garment, from the initial phase of analyzing the figure to the last one of the finishing touches for the article.

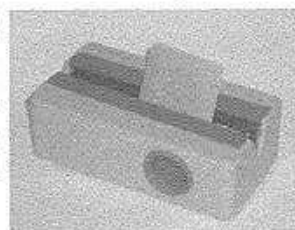
10) Mannequin

Useful for making garments to measure, since it reproduces the contours of the figure, as well as the measurements of the bust, waist, and hips. It can be used to pin up the paper patterns, to check garments as they are being made, to see if they need further adjustments, as well as for the finishing touches, such as the position of the pockets and the hemlines. Adjustable mannequins have mechanisms for expanding or reducing the individual areas of the bust, the waist, and the hips.



11) Tailor's chalk

They come in an assortment of colours and may be made of clay or wax, or the vanishing kind. Clay chalk is especially suited to smooth-finish fabrics; the wax kind is more suitable for coarse fabrics and is difficult to remove from fabrics with a hard finish.



12) Chalk sharpener

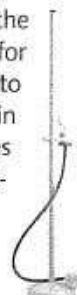
A plastic or wooden tool equipped with blades for sharpening the tailor's chalk.

13) Needles

The size and type of needle used depends both on the job to be done and on the fabric to sew. Needles for handsewing are numbered inversely with respect to their thickness. There are various kinds of needle, in relation to the job they are meant to perform: needles for sewing machines and for handsewing, and needles for upholstery, embroidery, mending, etc.

14) Hem-Marker

Device consisting of a metal measuring stick holding a bottle containing chalk powder that can be puffed onto the garment at the desired height by means of a rubber bulb.

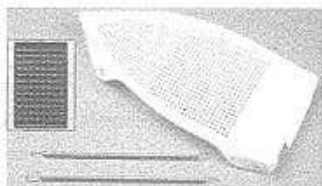


TOOLS AND EQUIPMENT

IRONING EQUIPMENT

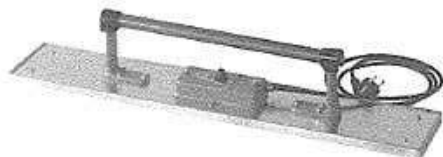
1) Irons

Can be either steam or dry iron, weighing up to 5 kg. The steam iron can be used to preshrink new fabrics without wetting them, or to block the garments.



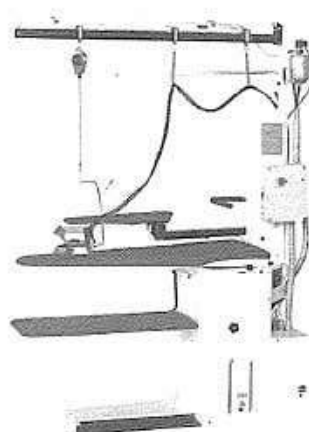
2) Ironing press

This is particularly useful for applying iron-on interfacing. With it, the interfacing can be applied over large surfaces or smaller pieces can be grouped together for treatment in a single pressing. The pressure exerted can be up to about 45 kg, in line with the interfacing manufacturers' recommendations.



3) Ironing boards or tables

Semi-elliptical, padded wood or metal mesh board mounted on a metal frame or installed in a cabinet, for ironing.



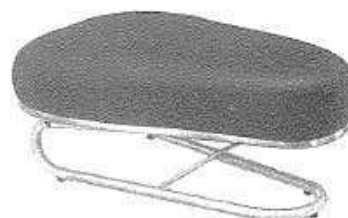
4) Sleeve board

Small ironing board with two differently-sized sides, used to iron sleeves and other narrow openings.



5) Tailor's pressing ham

Oval-shaped, padded ironing accessory. Used to iron the breast of a jacket, darts, sleeve caps, and shoulders.



6) Velvet needleboard

A board made of wood or some other material, covered with tiny steel pins, used for ironing velvet or corduroy, or fabrics with raised patterns.



Note about iron use

In tailoring and dressmaking, the use of the iron must be very measured, or to put it better, the iron must be intelligently used depending on the fabric employed and the pattern to be realized. If the iron is needed to restore to the fabric its initial beauty that the work spoiled, that is no reason to abuse it as an auxiliary that corrects, at times, flaws. This can occur sometimes in men's suits, and in the manufacture of ladies' suits, where selected fabrics lend themselves to and withstand the over-use of the iron and vapour.

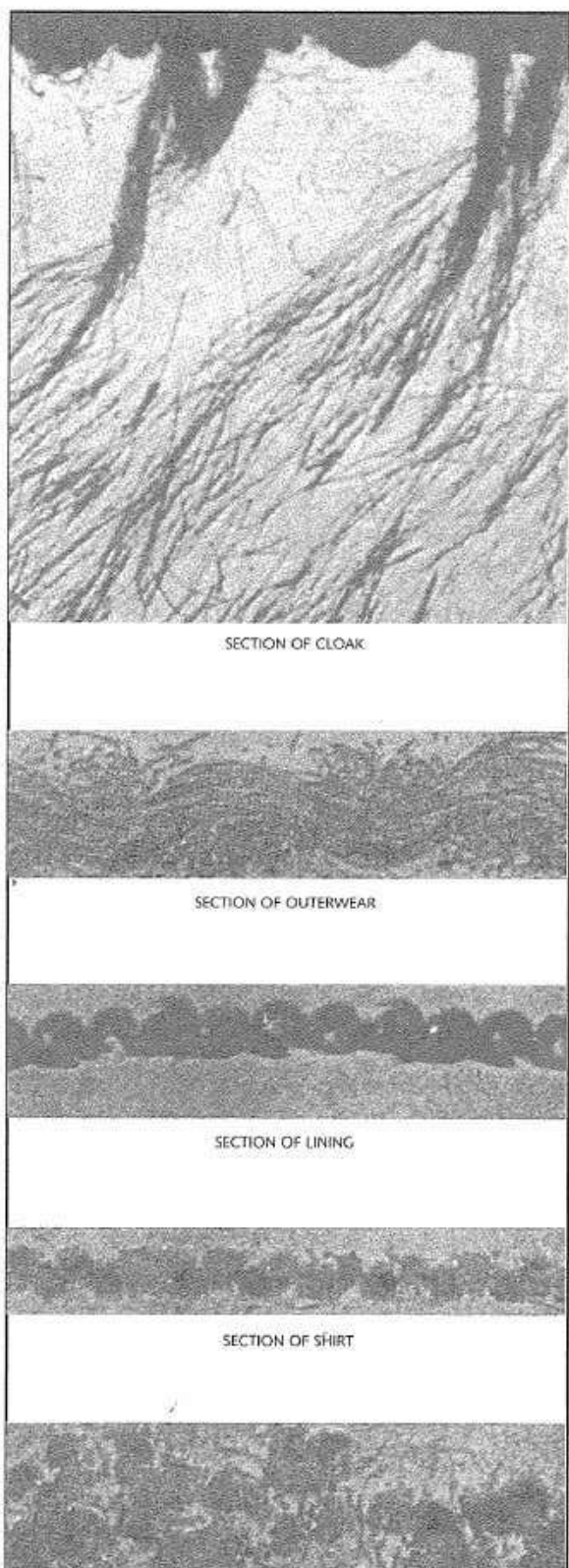
But with delicate fabrics with a fine and lightweight texture, we cannot use the same system and expect the same results.

The lighter the fabric, the less it obeys the iron; the more delicate the fabric, the more the iron can damage it.

We must realize that, apart from some rare exceptions, all the smoothed areas, all the wrinkles that are absorbed by the iron, can only just barely withstand the force of the heat, even if at first glance, they seem to yield to the activity and the result apparently satisfies us.

THE FABRIC

SECTIONS OF VARIOUS FABRICS USED DURING THE WINTER

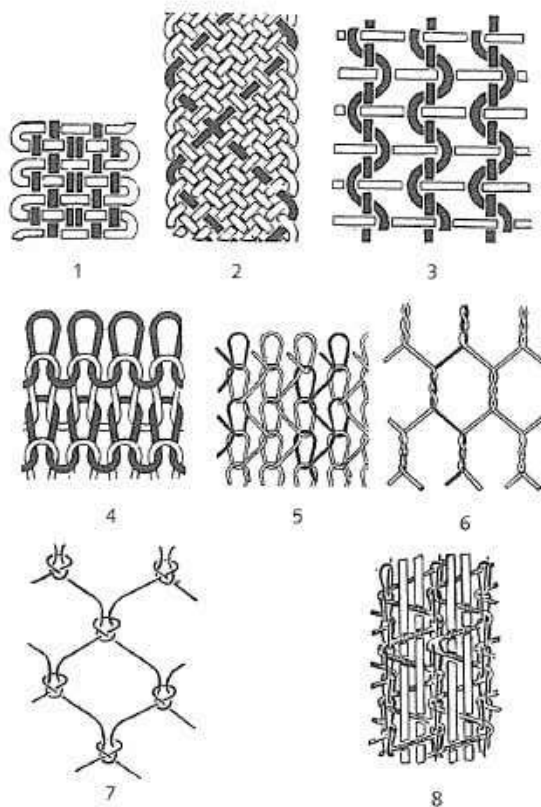


Note: In these sections, the Weft and Warp of traditional fabrics can easily be identified. Fabrics brought into contact with the body (underwear) are knit. The outer layer, that is, the overcoat, is the bulkiest clothing and employs the heaviest, most insulating and thermoregulating fabric, thanks to the air it contains.

Fabric is a flexible layer made up of one, two, or more arrays of threads that intersect and intertwine in given directions, depending on the setup of the loom.

In ordinary language, the word *fabric* indicates a vast range of industrial or handcrafted products with remarkably different structural characteristics, but which, at first glance, present a rather similar appearance.

Thus, it is important to arrive at a classification or codification of fabrics, so that there is a language shared among the manufacturers.



FABRIC CATEGORIES

1) Textiles with two or more sets of threads set at right-angles to one another.

The individual threads are generally straight and parallel to the fabric's two dimensions (length and width). - Fabrics Fig. 1

2) Textiles with more or less straight threads, parallel in places, and, usually, oblique to the fabric's two dimensions. - Braids Fig. 2

3) Textiles with three sets of threads. Two of them are arranged as in the first category textiles, while the third set of threads has a winding movement. - Gauze weave Fig. 3

4) Textiles where the thread follows a meandering crosswise path. - Weft knit Fig. 4

5) Textiles where the thread follows a prevalently longitudinal path. - Warp knit Fig. 5

6) Textiles where the threads follow a winding, longitudinal path, wrapping diagonally around one another. - Tulle Fig. 6

7) Knotted textiles. - Nets Fig. 7

8) Nonwoven textiles. - Felts - Needle-punched fabrics - Thermal bonded fabrics - etc. Fig. 8

THE COMPONENTS OF FABRICS

Fabrics with one or more sets of threads at right angles are made up of a weave of threads that includes at least one *Warp* and one *Weft*.

The warp is a set of threads that will make up the length and the grain of the fabric, stretched vertically between the warp beam and the cloth roll take-up. The warp threads are typically more tightly twisted and stronger than those of the weft.

The weft is a set of threads that in the fabric are normally arranged perpendicularly to the warp, with which they become interlaced during the weaving process by means of the passage of the shuttles containing the bobbins.

The warp determines the height of the fabric, which can range from 70 to 150 cm, reaching, in the case of bed linens, a height of 240 cm, and for Tulle, 300 cm.

The *Selvedge* (or *Selvage*, U.S. English) is the term for the edges of the fabric and pieces of cloth.

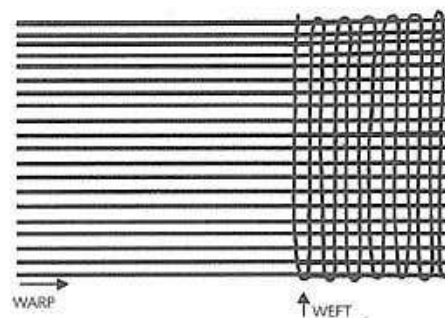
Its width varies, and is often characterized by a denser warp or by warp threads having a different chemical composition. Selvages, in addition to preventing the fabric from fraying, also make it possible to keep it taut during the finishing process (ironing, polishing, starching, etc.), using special wedge-shaped fasteners that hook into the reverse side of the selvages. In fact, we can often see on the selvages of pieces of cloth small holes that on the top side present raised fibres created by the metal hooks piercing through from the back. This is also one way to distinguish the right side and the wrong side of a fabric.

RECOGNIZING THE RIGHT SIDE AND THE WRONG SIDE

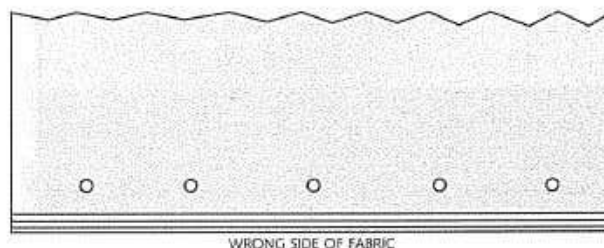
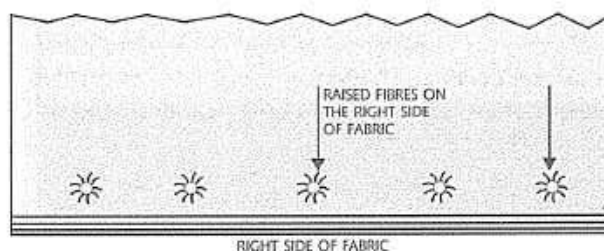
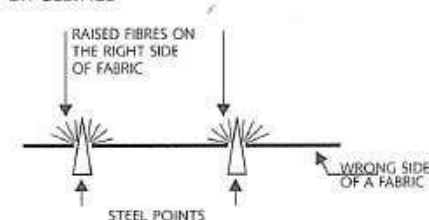
In all fabrics, it should be kept in mind that:

- The selvedge is always along the warp.
- The warp is always stronger than the weft.
- The warp is always represented by the higher yarn count.
- The yarn with the higher number of twists/inch is generally that of the warp.
- In napped fabrics, the nap is always turned in the direction of the warp, never of the weft.
- In striped fabrics, the stripes are parallel to the warp and nearly never made in the direction of the weft.
- In checked fabrics, the pattern is never perfect in the sense of the warp, but appears slightly elongated.
- In pure silk fabrics, the warp threads are paired and more tightly twisted.
- If it is a bolt of fabric, the right side of the fabric is on the inside of the fold.
- The letters and numbers printed on the fabric are always read from the wrong side; the right side has no markings of any kind, apart from rare exceptions.
- In sample swatches, the label is put on the right side of the fabric.
- In worsted fabrics, the ribbing of the twill weave will move diagonally downwards and right, while in woolens, it will be the opposite, that is, diagonally towards the left.
- In printed fabrics, the pattern is, of course, sharper and more evident on the right side.

WARP AND WEFT



SELVEDGE OR SELVAGE



THE DIRECTION OF THE FABRIC

To determine the direction of the fabric, the following factors should be borne in mind.

- In patterned fabrics, the direction is determined by the design itself. Some designs may be used interchangeably in both directions; but if it is a one-way design, what is important is that all the elements of the garment follow the same direction.
- The direction of solid-coloured fabrics is determined by the direction of the nap, which, brushed smooth, should run from top to bottom, as it produces less pilling.
- In the absence of nap, it is in any case recommended to maintain the same direction to avoid the varying effects of the light and the occurrence of pilling in some areas.
- For velvet, the direction is decided on the basis of the desired effect. If we want a garment with a more intense sheen and a deeper colour, the nap should smooth upward. If we want a garment where the shiny, whitish look due to wear is as inconspicuous as possible, the nap should smooth downward.

HEIGHT OF THE FABRIC

The *height of the fabric* is the measurement expressed in linear centimetres of the distance between one selvage and the other.

The *usable height* excludes from the above measurement the two selvages, which range from a few millimetres to a few centimetres.

The *height of the pattern layout* is established by subtracting a few centimetres from the usable height of the fabric (usually 3–4 cm), to insure against the slippage of the layers of fabric.

The height of the fabric can be single or double.

It is single if less than 100 cm (typically 70–80 cm).

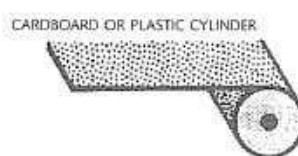
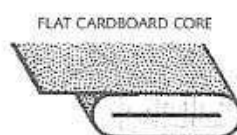
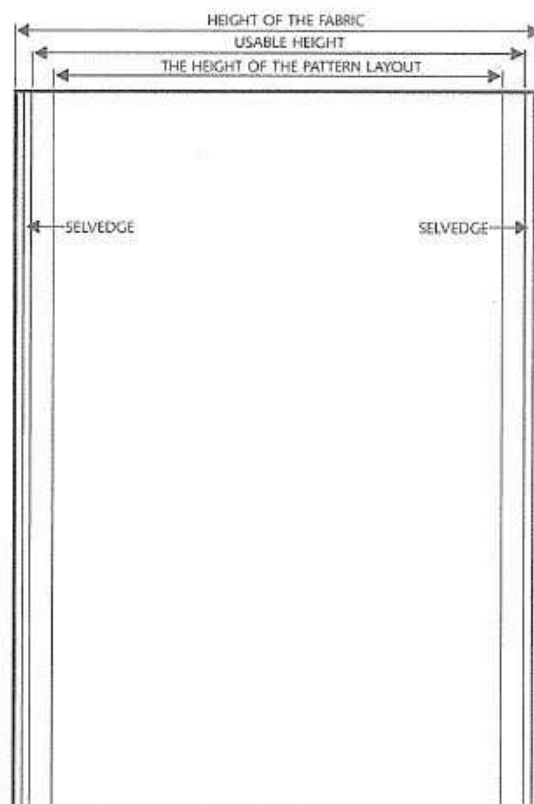
It is double if greater than 100 cm (typically 140–150 cm).

Generally speaking, summer fabrics have a single height, while wools and men's fabrics are double.

Nowadays, however, textile manufacturers produce 150-cm fabrics, regardless of the season and the fibre content, to satisfy the needs of the garment industry.

There are maximum-height fabrics (from 200–300 cm), for bed linens, for example, and tulle and other fabrics, manufactured using normal or circular looms.

Fabrics made for sartorial use are wrapped on a flat cardboard core, folded double, with the right side inside the fold; those for industrial use are rolled on a cardboard or plastic cylinder, with the right side on the interior.



THE GRAIN OF THE FABRIC

The grain of the fabric is the same direction as the warp or the selvage.

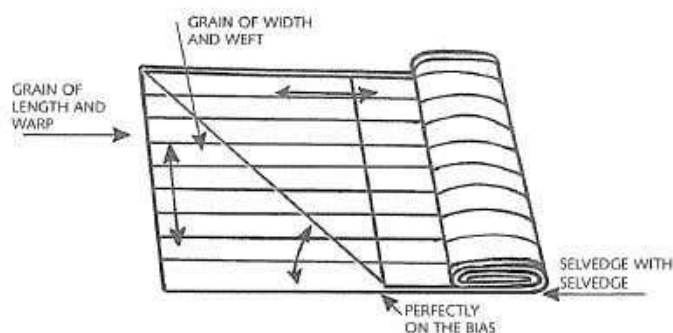
Loom-woven fabrics are made up of longitudinal threads that intersect with the cross-threads.

When these threads are perpendicular to one another, it is a straight grain fabric.

It is very important to make sure that the fabric is perfectly aligned with the grain when laying out the pattern pieces for cutting them.

If the fabric is not cut precisely on the grain, the garment will never drape well, or have a good fit.

THE GRAIN OF THE FABRIC



THE FABRIC TO BE CUT

The graphic of the layout or the individual pattern pieces are laid on the fabric to be cut, bearing in mind that the width of the layout may be determined by the usable height of the fabric (height of the fabric minus the selvages).

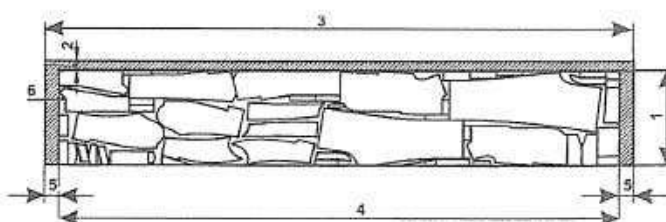
The degree of utilization of the fabric is expressed as a percentage ratio of the fabric used (usable area) compared to unused fabric (production waste).

The simplest method for carrying out a layout graphic is simply to arrange the pattern pieces, inclusive of the sewing margins, manually, one next to the other, on the fabric.

The pieces are outlined and then drawn directly onto the fabric.

The arrangement of the pattern pieces on the fabric may be analyzed in a reduced scale at first, in order to achieve the best possible result.

CHARACTERISTICS OF THE FABRIC TO BE CUT



- 1) Usable height - width of the fabric minus the width of the selvages.
- 2) Selvage waste - Cutting waste on the width of the cloth.
- 3) Default length - Length of the graphic + head and foot.
- 4) Length of the layout graphic.
- 5) Cutting head and foot - Cloth remnants at the top and the bottom of the fabric.
- 6) Cutting waste - fabric scraps from within the pattern layout.

THE PATTERNS

The *Pattern* or *Template* is the graphic representation of the structure of an article of clothing, and it forms the basis for the successive phases of assembling and finishing the garment. The Pattern can be made by hand or with the help of a computer.

There are essentially three methods for the realization of hand-made patterns: by Draping or Moulage; by Basic Pattern; and by Flat Pattern.

The *Moulage* method is a way of constructing the pattern directly on the mannequin using pieces of muslin fabric. However, it requires considerable technical skill, and is employed by many dressmakers, especially in France and in the USA.

The *Basic Pattern* method is mainly used to create patterns for people with fitting problems, so that the standard patterns can not be adapted for their use. It requires a detailed measurement of all the parts of the figure relative to the garment to be made.

The *Flat Pattern* method consists in making a basic pattern that can be used to create many other patterns of different styles that take into consideration all the characteristics of the individual figure, including a comfortable fit appropriate to the garment.

Every company has a basic pattern that corresponds to its target customers, so that its entire line apparel is suited to that figure.

COMPUTER-GENERATED PATTERNS

For the creation of the patterns for the new collections, apparel manufacturers usually use suitably modified archive patterns. Nowadays this is carried out using computer-aided design (CAD) systems.

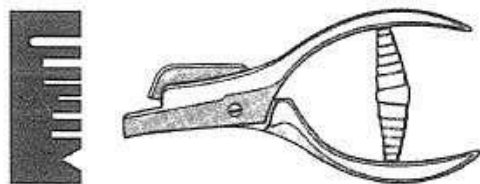
With the help of this system, the basic patterns, made manually and digitalized, or created directly on the computer, are saved in the computer files and retrieved and transformed as needed.

INDUSTRIALIZATION OF THE PATTERN

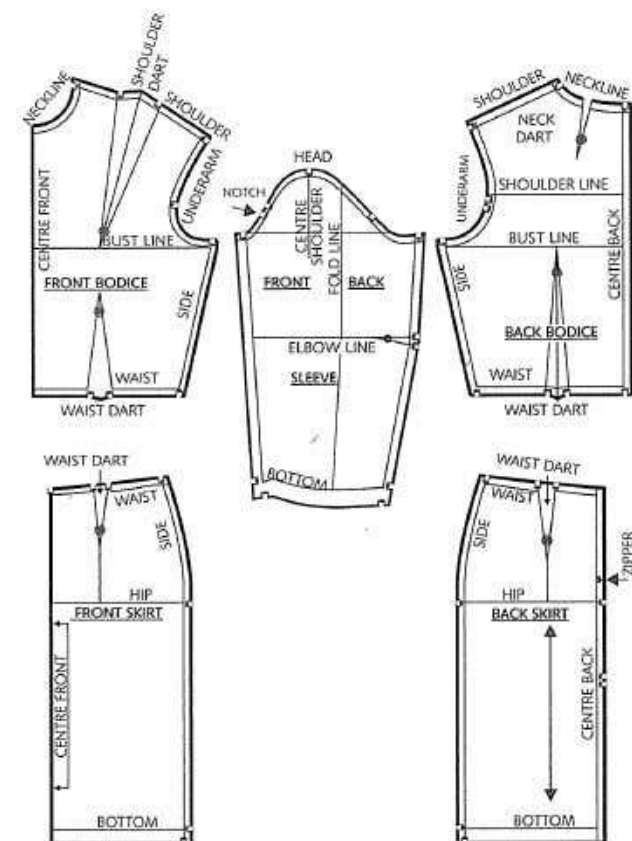
The industrialization of the pattern came along with the introduction of seam allowances and markers to facilitate the subsequent processes of the cutting and assembly of the garment.

In particular, markers were added for: notching, punching and tailor's tacks, inserts and slits, and seam allowances.

The notching is carried out on the pattern edges using special punches, and it comes in different shapes and sizes, depending on its purpose.



Notches can be found in various places along the pattern edges and may indicate:



- The seam allowance.
- The centre of the pattern.
- Gathering and tension.
- The base of the dart.
- Identification of the front (one notch) and the back (two notches).
- Matching of the sides of the pattern to be sewn together.
- Zipper placement.
- Vent pleat.
- Hemlines.
- Waistline.
- Inside of curves.
- Outer shoulder point for Kimonos.
- Pocket and trim placement.
- Neck centre on collars.
- Head of the sleeve.

PUNCHING AND TAILOR'S TACKS

These are small holes made on the pattern and then on the fabric using a special drill, or else by marking up the fabric using a template. They indicate:

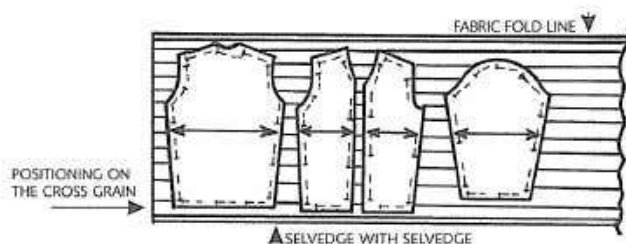
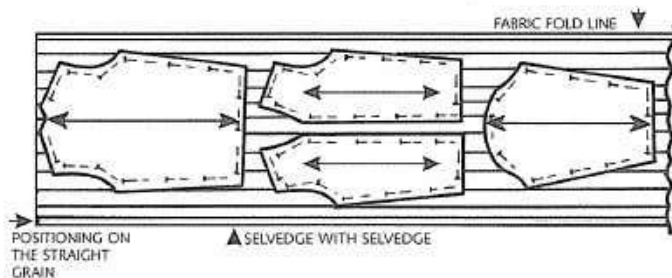
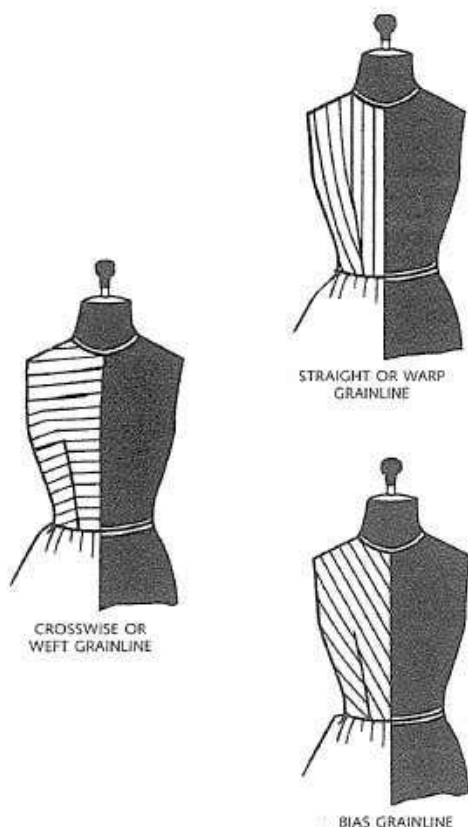
- The start and the end of the darts
- The curves of the darts
- The angles
- Button and buttonhole placement
- Trim placement
- Pocket placement.

SEAM ALLOWANCES

The size of the seam allowance varies in relation to the position, the type of garment, and the kind of fabric used, and it ranges from 1 cm to 2.5 cm.

For seams made using a serger, the allowances range from 0.7 to 1.2 cm.

PATTERN GRAINLINES



The grainline arrows appear on every component piece of a pattern and indicate how they must be positioned on the fabric.

The grainline arrow must be clearly marked on every piece, so that they can be positioned in alignment with the warp threads; usually it runs up the centre front and the centre back, and up through the centre of the sleeves.

POSITIONING ON THE WARP GRAIN

When the pattern's grainlines correspond to the warp of the fabric, the garment is said to be on the straight grain. The positioning of the pattern pieces on the warp grain is the most common solution for the following reasons:

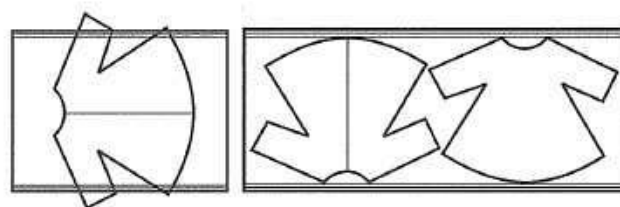
- 1) The warp is usually made of thicker and stronger threads and thus allows the garment to hang better and straighter on the wearer.
- 2) The shrinkage percentile is usually greater in the direction of the warp (lengthwise) and is easy to correct by letting down the hemline. If, instead, the garment is cut on the cross grain, it could shrink in width, altering the fit.
- 3) The garment follows the direction of the fabric, and with napped fabrics, a straight grain layout is a must.

POSITIONING ON THE WEFT GRAIN

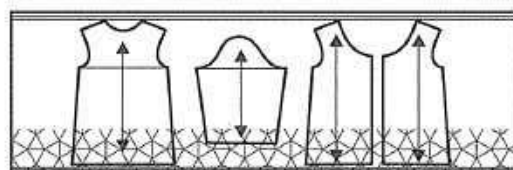
When the pattern's grainlines correspond to the weft of the fabric, the garment is said to be cut on the cross grain.

There are patterns that call for parts positioned on the straight grain and other parts on the cross grain, thus creating a decorative motif.

In other patterns, instead, the style of the garment (a kimono, for example), the fabric's height is insufficient to contain the pattern on the straight grain, so it must be positioned on the cross grain.

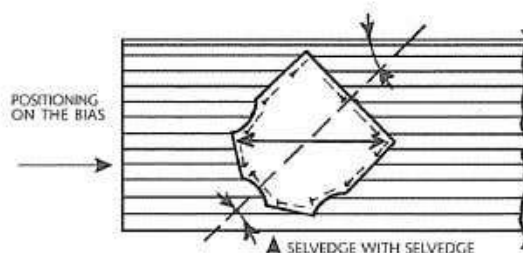


Other times, the pattern is cut on the cross grain to make the most of a fabric decoration running along the selvedge.



POSITIONING ON THE BIAS

A pattern or a part of a pattern is said to be laid on the bias when its grainline is positioned diagonally 45° to the fabric's grain, or, (and this is more correct) if the true grainline appears on the pattern, that is, crosswise to it, must be positioned parallel to the selvedge.



INDUSTRIALIZATION OF THE PATTERN

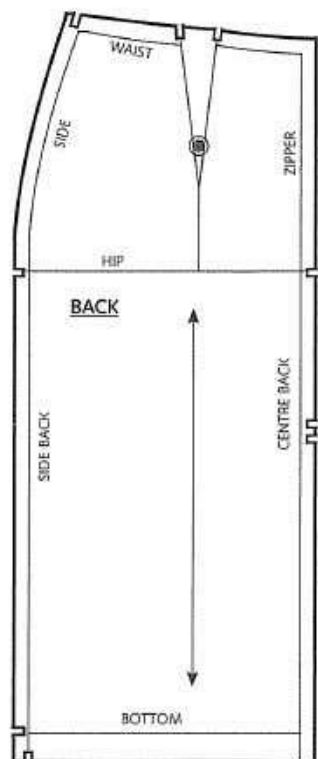
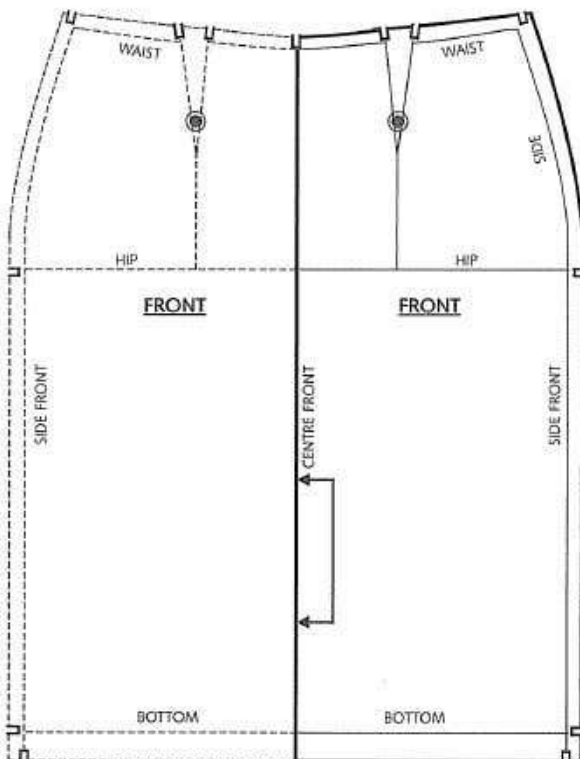
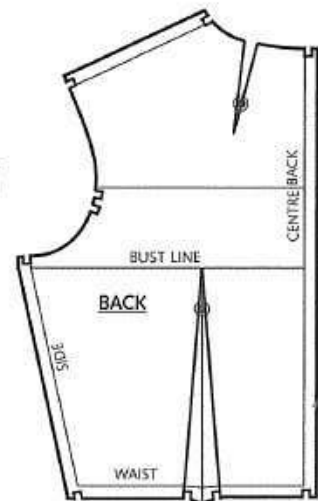
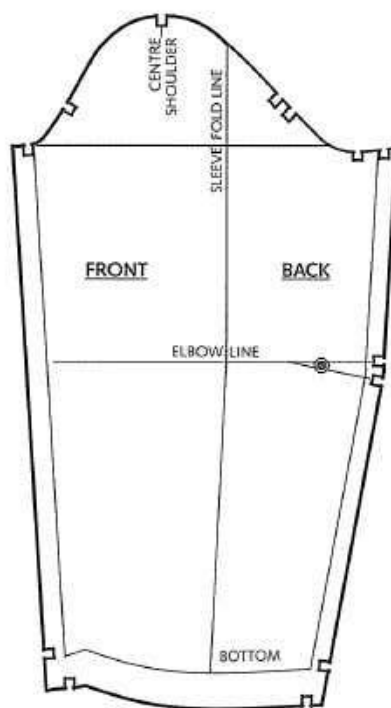
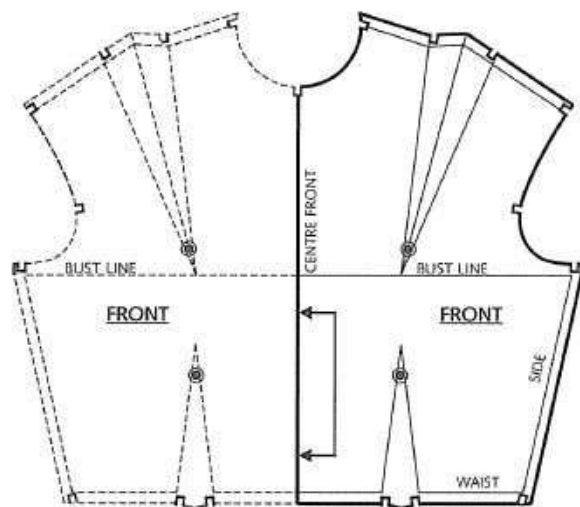
During the creation of the pattern, it is essential to indicate all the information that might help to simplify the cutting and assembly of the garment.

In particular, the following should be indicated:

- *The Grain*, which should always be shown in the form of an arrow on every piece of the pattern.
- *The Pattern Parts*: it is important to identify each pattern piece (e.g.: front - back - sleeve - skirt - pocket - centre front - centre back - side - centre).
- *The Collection number*, which is the code that is used to

identify the pattern.

- *The Size*: if there is more than one size, it should be marked on the pattern.
- *The Number* of garments to be produced using the same pattern.
- *The Symbols* for assembling the garment, the notches, which make it easier to match up the pieces to be sewn together, and dots indicating the points of the darts, and which will also be needed for drilling the holes in the layers of fabric, in the case of series production.



PATTERN GRADING

By pattern grading, we mean how the pattern size can be increased or decreased with respect to the basic pattern (e.g.: Size 42) to create a range of fits. Grading factors are applied to the original measurements in length and width, to increase or decrease the size without having to create a basic pattern each time and more accurately achieving a comfortable fit.

In pattern grading, it is necessary to pay attention to the garment's proportions, which must not change or alter the look compared to the original basic pattern, distributing the total offset value among the various pieces of the pattern in a way that is proportional to their size.

The difference between one size and the other gives the variance between the various sizes.

Nowadays, manual pattern grading is not common, and while it is still essential to know how to do it in order to apply it to other systems, industry is increasingly turning to computer systems, which automate the grading using specific mathematical formulae (algorithms) and specially designed CAD programs.

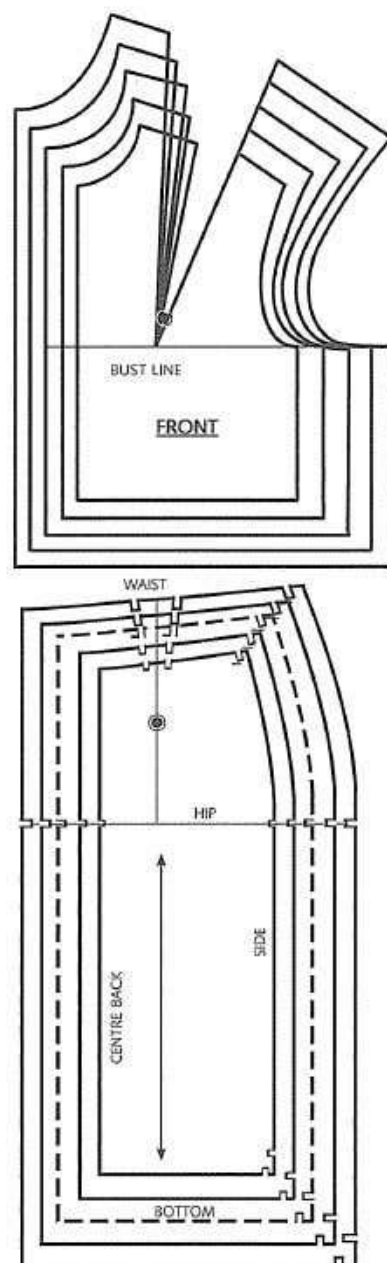
The computerized procedures for pattern grading depend on the level of technology that the individual manufacturer has achieved.

Generally speaking, there are two main computerized pattern grading systems:

- 1) A system in which the incremental values are entered in the computer and automatically applied for the generation of the other sizes, just as occurs with manual pattern grading.
- 2) A system in which sizing tables are used to re-calculate each size using the same method of calculation that was applied for the basic pattern.

The procedure for size grading using a computer requires either a basic pattern created directly on the computer in 1:1 scale, or the digitalization of an existing paper pattern, a technique that is included in the CAD patterns program.

Then the pattern in all of its sizes can be saved to the pattern archive and, when needed, retrieved and reutilized.



Note: The last chapter of this book is dedicated to the grading of skirt and trouser patterns, and the subject will be covered exhaustively in the volumes to come, touching on all the main apparel items, even those with patterns made up of many parts requiring a precise calculation of the values to be subdivided among them all.



DIGITALIZATION BY COMPUTER

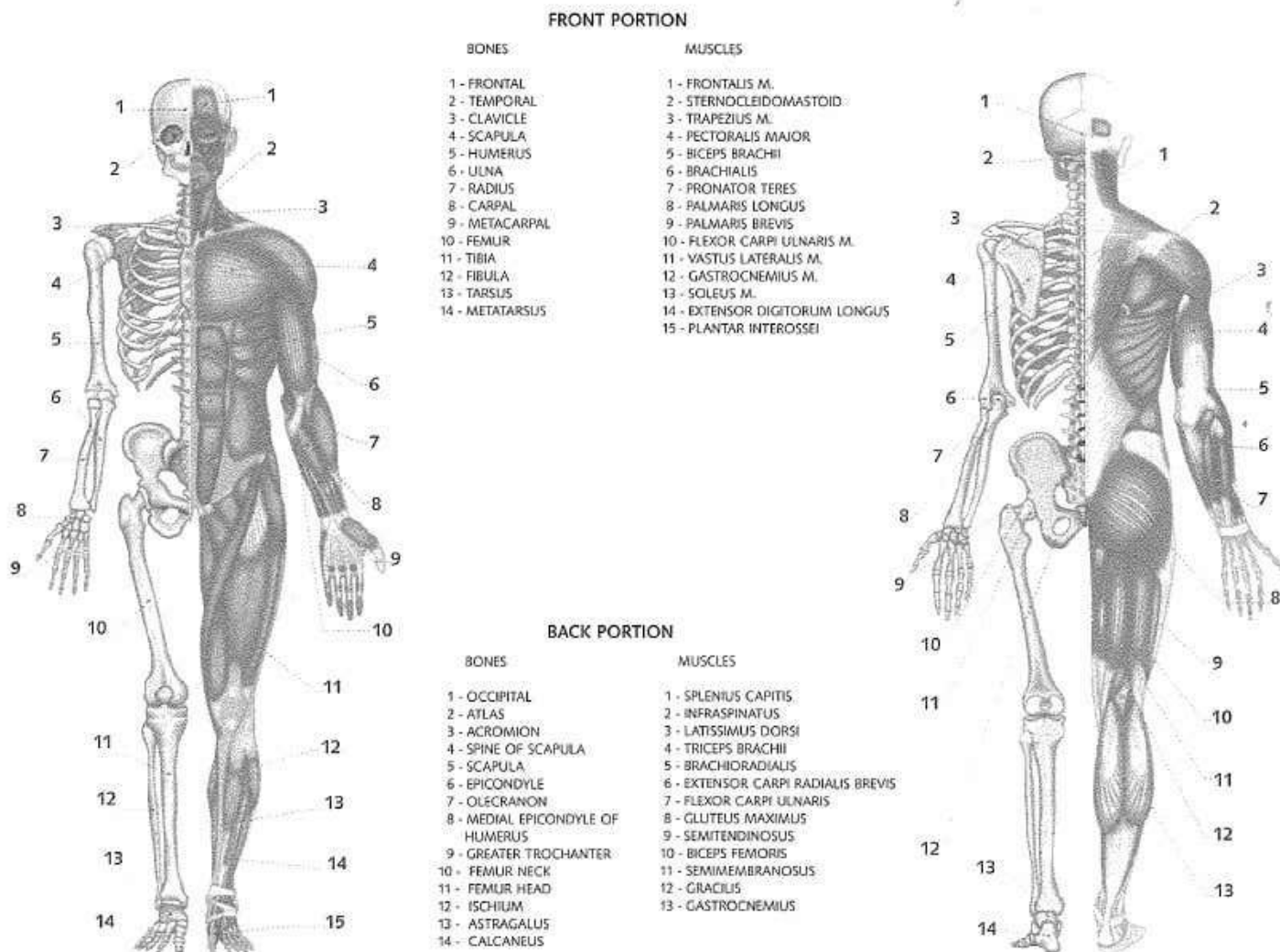
ANATOMY OF THE HUMAN FIGURE

While not pretending to turn the art of cutting into a science, we think it is necessary to review a few basic notions about anatomy (body structure) and physiology (the functioning of the organs) so that the name of every organ and muscle becomes familiar to anyone who, like you, works with the exterior appearance of the figure.

THE SKELETON

The skeleton is the framework of the human body, and therefore determines its proportions and characteristics. With regard to the shape, the bones can be long, flat, wide, short, or irregular. The bones of the limbs are long and cylindrical. The wide and flat bones surround and protect the body's internal organs. The most mobile parts of the body, the hand and the foot, are made up of small bones. The irregular bones are those of the skull.

The bones are connected by joints that can be: fibrous joints without mobility (e.g.: the skull bones), cartilaginous joints, in which movement is restricted, synovial joints in which the bones are endowed mobility. The main kinds of movement that the joints have are: flexion (bending), extension (straightening); abduction (away from the median line); adduction (toward the median line), and medial and lateral rotation.



THE MUSCLES

The bones are moved by the muscles. These come in various shapes, and their ends are attached to the bones by means of tendons and *fasciae late*. The limbs usually have long muscles, while the wide muscles generally permit the movement of the torso. The short muscles are fleshy and very powerful. Ring-shaped muscles surround the body's orifices (e.g.: the muscles of the mouth).

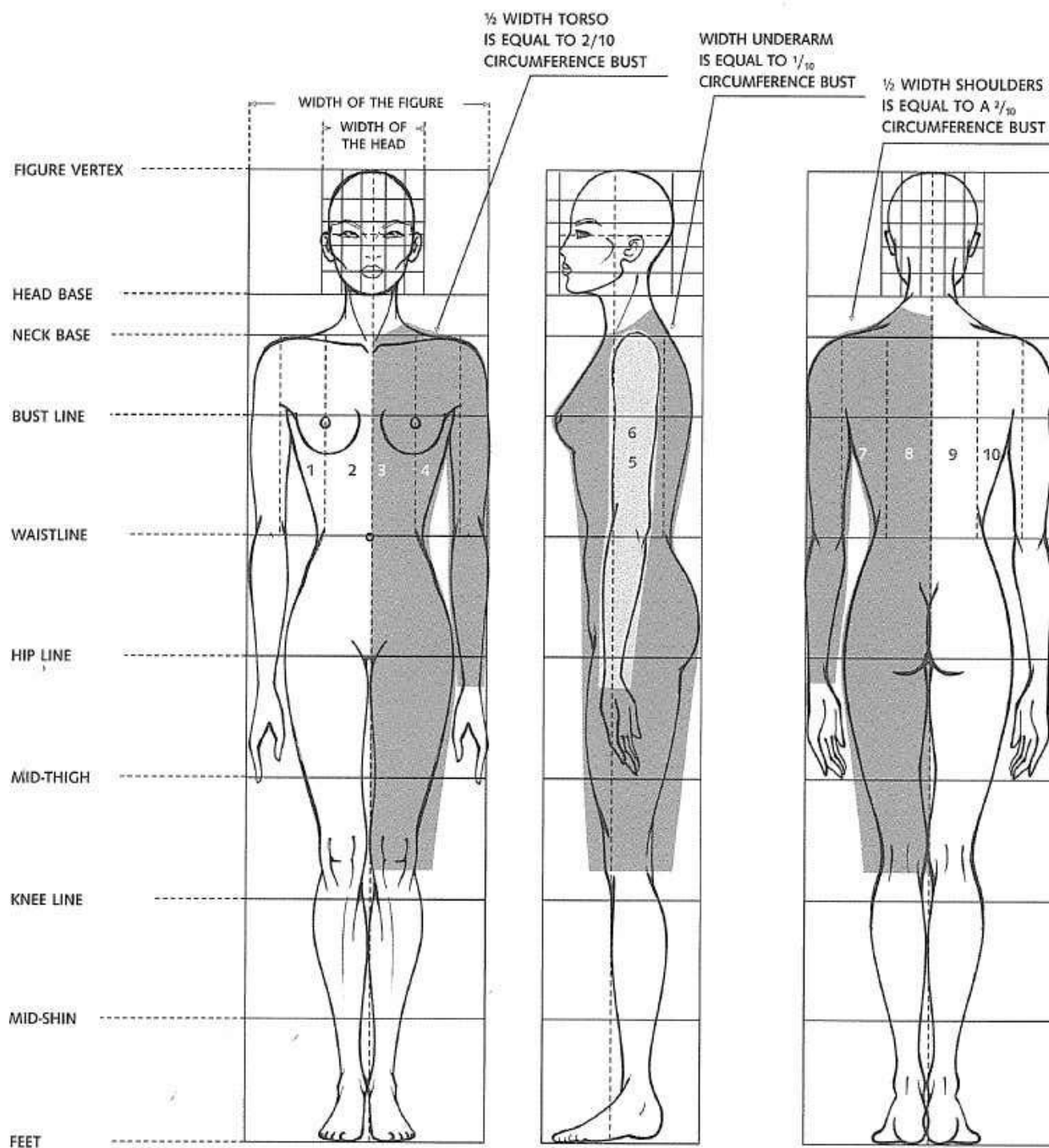
The muscles perform one function, they contract, that is, they

become shorter and thicker as their extremities grow closer together.

Due to the contraction, some parts of the body come closer together or grow farther apart or rotate medially or laterally. The action of a muscle may be enhanced or hindered by that of another muscle; usually, these contrasting actions are performed alternately, for example, in the limbs moved by the flexor muscle (bending) and the extensor (straightening). They may also act simultaneously, as in the case of the hand clenched into a fist.

PROPORTIONS OF THE FIGURE

In the study of proportions, the human figure can be divided into eight equal parts that have as reference the length of the head.



The second head-length ends at the centre of the bust, the third at the waistline, the fourth at the hips, the fifth at mid-thigh, the sixth at the inner edge of the knee, the seventh at mid-shin, and the eighth at the sole of the foot.

In each individual there may be physical defects that must be identified when the measurements are taken, in order to make the alterations necessary for the garment's successful outcome.

- Women are on average 10 cm shorter than men in total

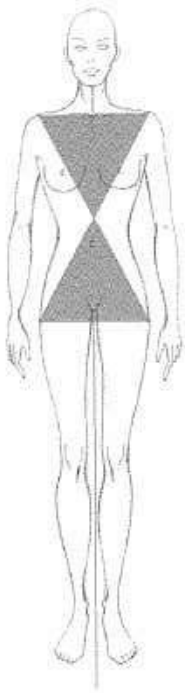
height and in the inseam length of the legs (from the ground to the crotch area);

- the torso, instead, is equal; the prominence of women's breasts compensates for the lesser development of the shoulders and shoulder blades;

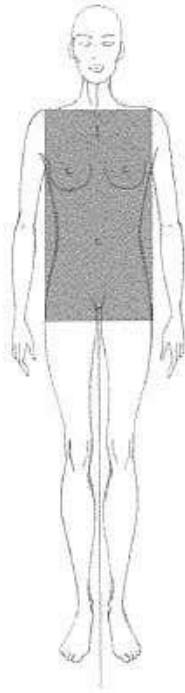
- there is no effective difference in neck length; since women have narrower shoulders and less developed muscles, it is believed they have longer necks than men, but actually their necks are thinner and more graceful, but not longer.

THE FEMALE FIGURE

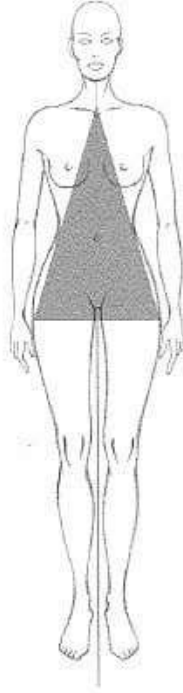
TYPES OF FIGURE



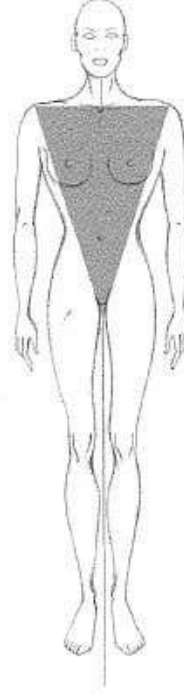
Subject with equal shoulders and hips and with thin waist.



Subject with equal shoulders and hips and with thick waist.

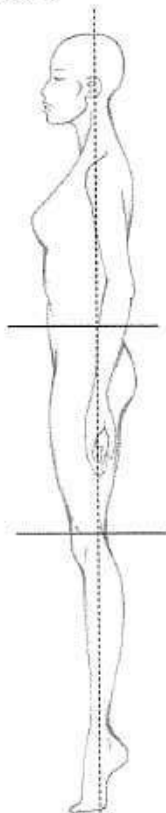


Subject with hips wider than the shoulders.



Subject with shoulders wider than the hips.

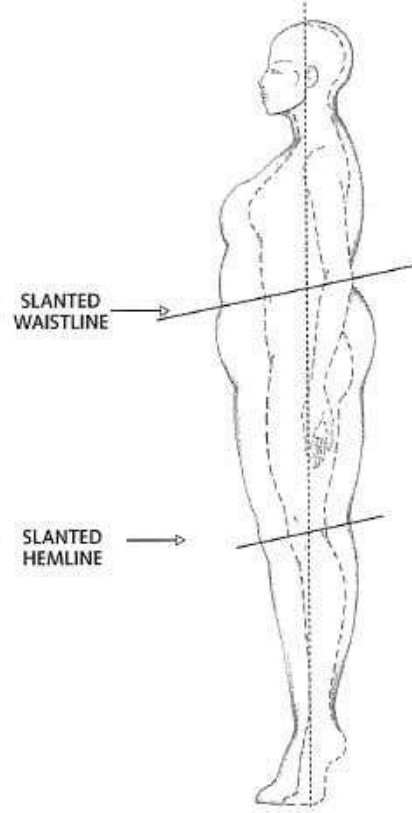
HUMAN POSTURES



PERFECT POSTURE
When the earlobe is in perfect alignment with the figure's vertical axis.



FORWARD POSTURE
When the earlobe is forward of the figure's vertical axis.



ERECT POSTURE
When the earlobe is aligned with, but behind, the centre of the figure.

THE HIPS AND LEGS

TYPES AND SHAPES OF HIPS

The hips may have different shapes comparable to geometric figures or symbols.

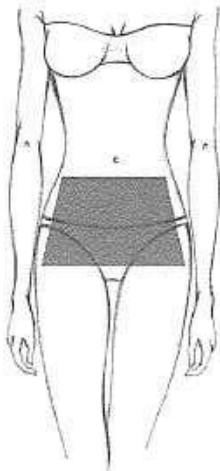
Regular hips - External curves regular and gradual from the waist to the widest point of the hips.

Squarish hips - External curves very pronounced, falling

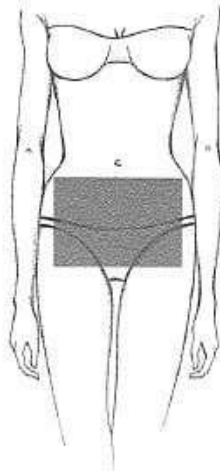
straight from the waist to the hips.

Lozenge hips - Diagonal external curves, starting from the waist and reaching the widest point at the hips.

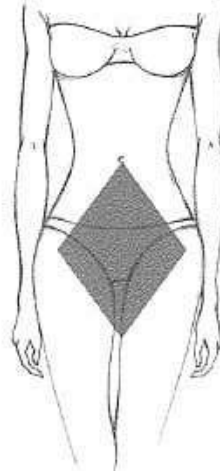
Heart-shaped hips - Very pronounced curves from waist to the hips and rounded off at the top.



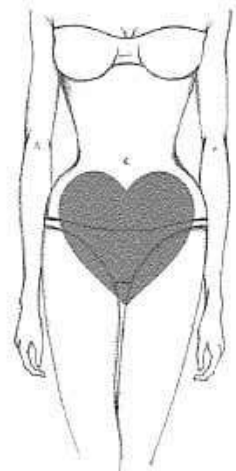
REGULAR HIPS



SQUARISH HIPS



LOZENGE HIPS



HEART-SHAPED HIPS

LEG TYPES AND SHAPES

Legs can have different and irregular conformations, among which the most frequent are: - Slender legs - Heavy legs - Bow legs - Valgus deformity (knock-knees).

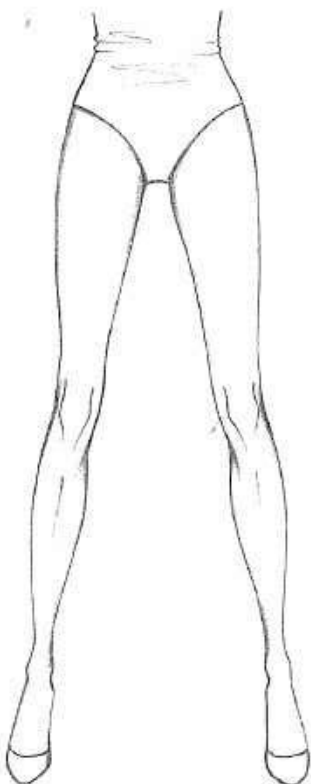
Slender legs - They are lean and scrawny; the hips are full;

there is space between the thighs.

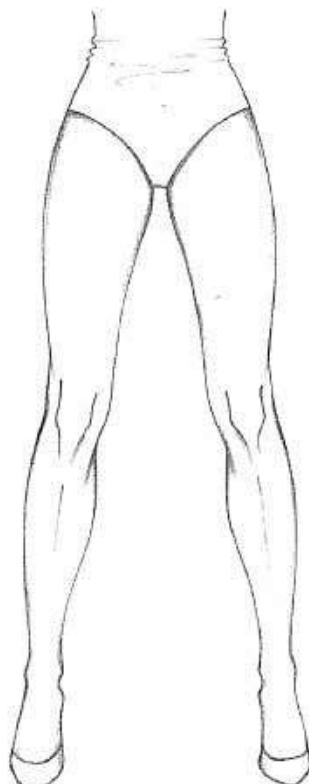
Heavy legs - The thighs are swollen; they are full in front and broaden the hips.

Bow legs - The legs curve outwards from the knee down.

Knock-knees - The legs turn inwards at the knees.



SLENDER LEGS



HEAVY LEGS



BOW LEGS



VALGUS DEFORMITY
(KNOCK-KNEES)

SHOULDERS AND BACK

SHOULDER TYPES AND SHAPES

In made-to-measure patterns, it is essential that the width, the slope, and the shape of the shoulders correspond to those of the individual, so the clothes hang right.

The shapes are:

Regular shoulders - Shoulders with a slight inclination equal to those of the basic pattern.

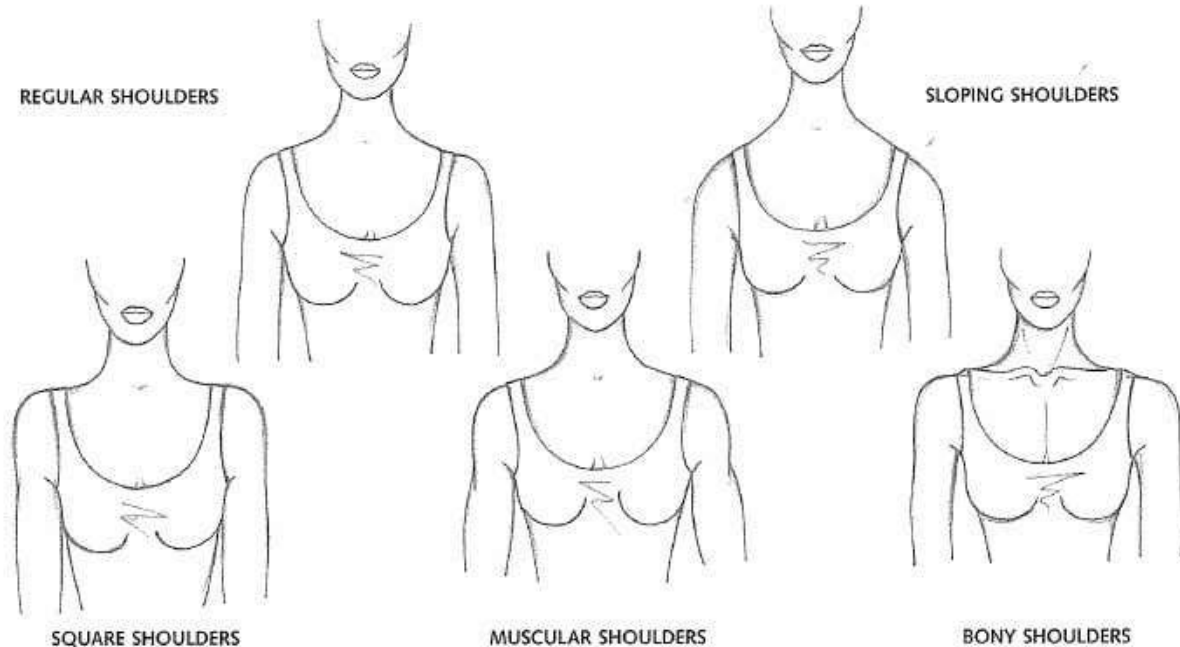
Sloping shoulders - When the individual's shoulders slope more

than those of the basic pattern.

Square shoulders - When the individual's shoulders are less sloping than those of the basic pattern.

Muscular shoulders - Physique with well-developed shoulders, especially around the back and neck.

Bony shoulders - Physique with bony knobs on the shoulders and the collar bones.



BACK TYPES AND SHAPES

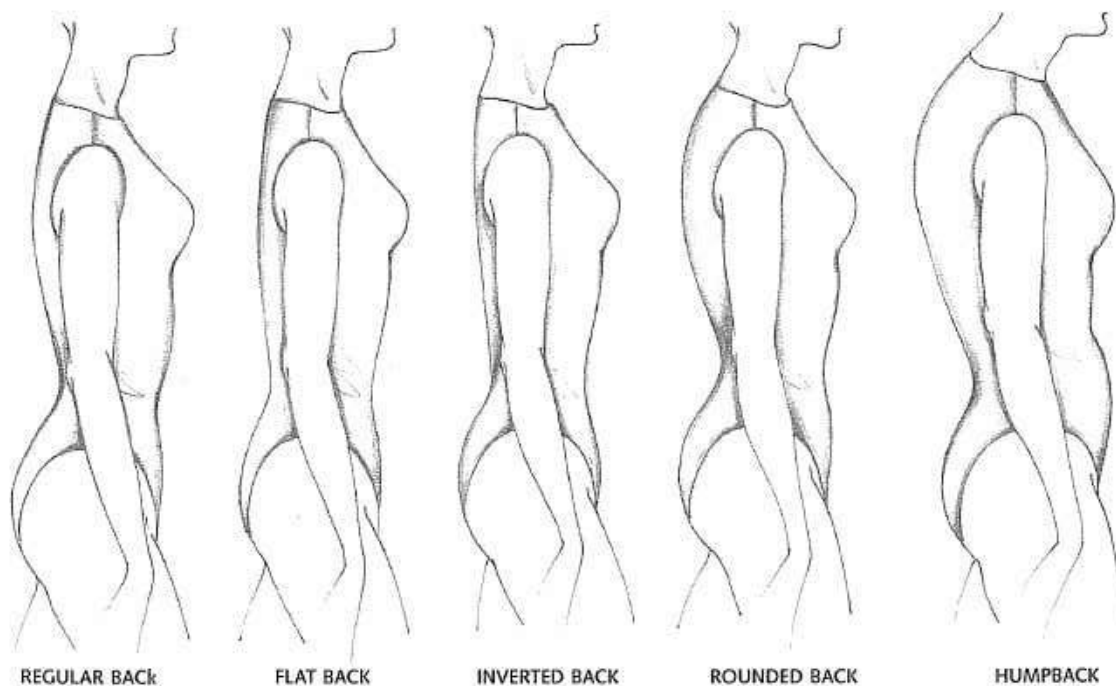
Regular back - Slight curve in the back and the centre of the upper arm corresponds to the basic pattern.

Flat back - Back is straight, without curves.

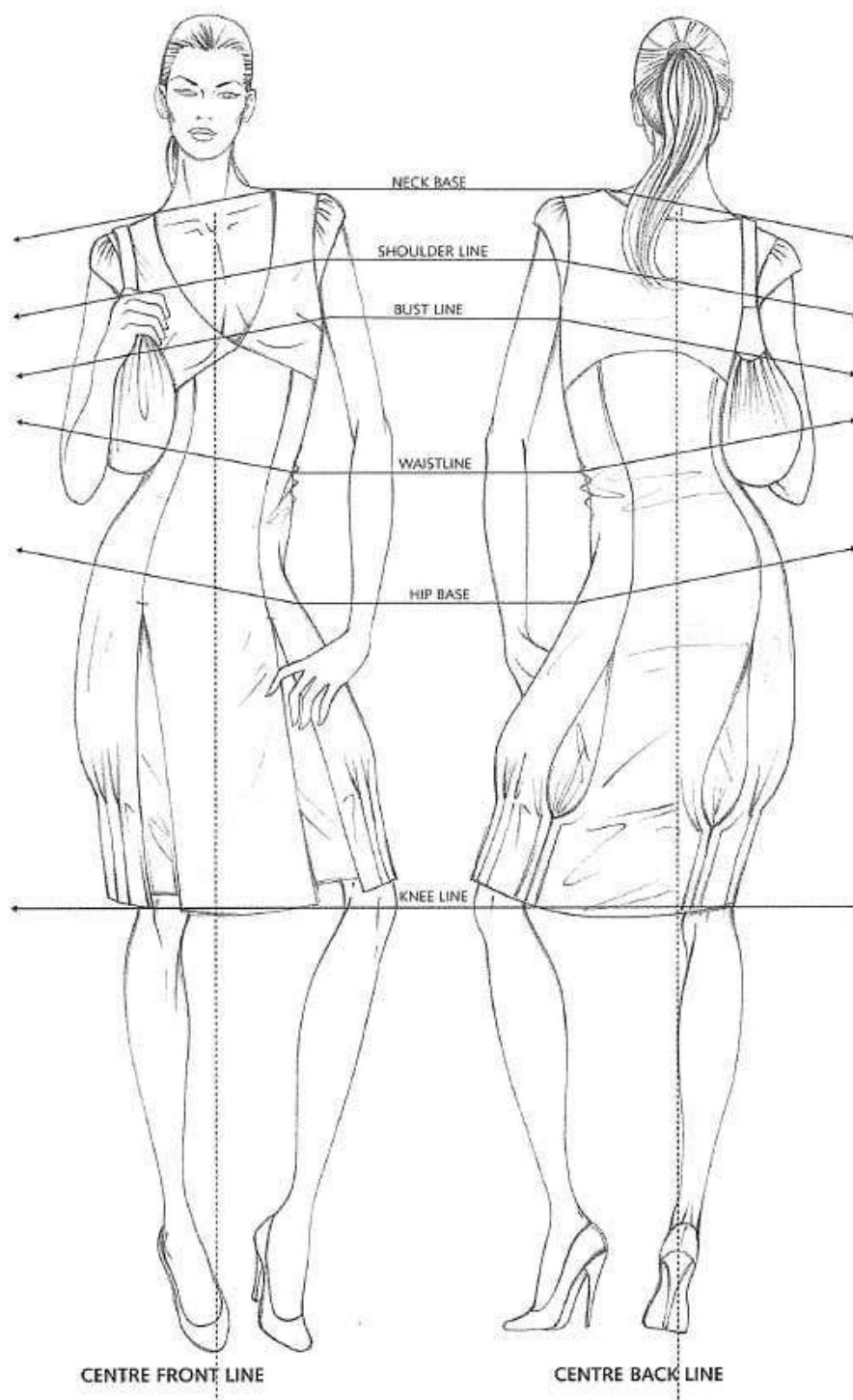
Inverted back - The back is convex, so it is shorter and the front longer; the centre of the upper arm is moved back compared to the basic pattern.

Rounded back - the upper back is more curved than that of the basic pattern.

Humpback - curvature of the upper back giving rise to a protrusion below the base of the neck (dowager's hump). The back is longer than the front and the arms are shifted forward.



THE INTERPRETATION OF THE FASHION SKETCH



Many designers, to inject their fashion sketches with clarity and relevance, have also specialized in pattern cutting and sewing, so they propose proportional sketches suitable to the pattern-maker's work, highlighting the seam lines.

More than a few, however, propose nice, attractive sketches that are full of flaws in terms of sartorial technique and utterly lacking in proportion, making their realization quite difficult.

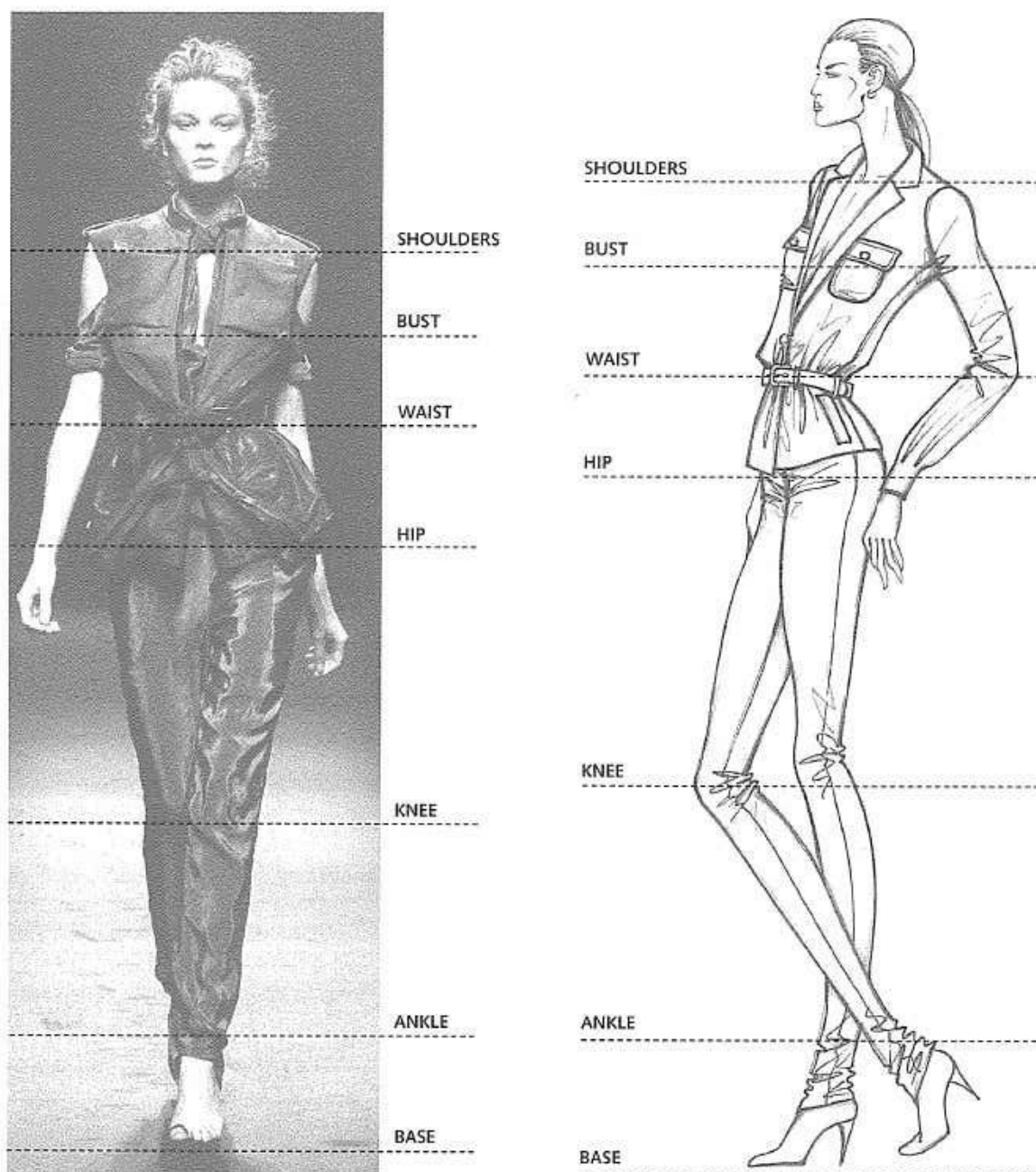
In cases such as these, only with expertise and deep knowledge of the technical standards and by making the necessary corrections to the fashion sketches is it possible to make the garment. Thus, it is advisable to use fashion sketches from specialized manufacturers in order to avoid wasting time and looking bad.

The exact interpretation of the sketch is the prerogative of a good pattern maker and promotes the faithful execution of the garment, just as the stylist conceived it.

One of the simplest ways to grasp precisely the proportions of the sizes and the motifs, the distances, etc. is to draw the essential lines directly on the sketch, that is, the necklines, the bust, the waistline, hips and knees, of the front and the back. All that remains is to observe carefully the position of the cuts and of the motifs compared to these lines, evaluating the size and the distances, keeping as a reference the measurements of the basic pattern and those of the individual.

At this point, the assembly of the pattern can begin.

DIFFERENCES BETWEEN THE PHOTO AND THE SKETCH



There is a huge difference between a sketch and the photograph of a real person, in terms of both proportions and dimensions. The sketch, especially when it is stylized is longer and more slender than the photo.

Women's average height is around 1.65 m, while sketch artists imagine here at 2.20 m.

Observing the two figures shown above, we can see how, although their shoulder lines are at the same level, as we descend the lines of the sketch do not get stretched until the knee, below which, from the knee to the floor, they are markedly increased.

Similarly for the width: the sketch is slenderer, thanks to the narrower hips compared to the real woman's shape.

These differences, exactly, are the secret of the slenderness in the sketch versus the photograph.

Sometimes, the designer, especially if new to the field of dress-making, is only concerned with making a pretty sketch, without bothering with the physical proportions which, instead, are extremely important for allowing the pattern maker to interpret and carry out the pattern correctly, just as important as the indications for the darts and the notches.

DRESSMAKER'S GLOSSARY

Asymmetrical (pattern)

A pattern that shows cuts, fastenings, or motifs placed off-centre on the front or back.

Bias

The line that crosses the fabric diagonally with respect to the straight grain.

Bloused

Loose-fitting style of shirt or dress, puffy, soft and full, gathered at the waist.

Bodice

The upper portion of a dress pattern.

Collar band

The part of the collar that rises up from the neckline.

Darts (or tucks)

Folds sewn into the fabric, carried out to provide shape to the garment corresponding to the bumps and curves of the figure. The darts are widest where they join the seam, taking up the excess fabric, and they taper to a point where the body's curves fill the space. The size of the darts is proportional to the size of the curves. The darts' position, their direction and their placement, vary depending on the pattern and the subject's figure. They can be either vertical or horizontal.

Vertical darts: those that rise and fall from the shoulder to the bust; from the bust to the waist; from the neck to the shoulder blades; from the waist to the hips; from the elbow to the cuff.

Horizontal darts: those that run across the pattern, starting from the side seams at bust height; from the centre front or the back front and those at the centre of the sleeve or at the elbow.

Drawstring

A narrow cloth strip or tube or cord that runs through a casing and can be pulled to tighten or close an opening.

Draping

All the soft folds that characterize a dress, a shirt, etc.

Facing

The facing finishes and reinforces the garment's edges, such as necklines, button plackets and cuffs.

It is usually hidden inside the garment, unless it is meant to be decorative.

Fastening

Fastenings make it possible to get into and out of clothing. They may be zippers, buttons, clasps, hooks and eyes,

velcro or any other device that makes it possible to open and close an appropriately proportioned space.

Fitted sleeve

Type of sleeve joined to the bodice along the entire perimeter of the upper arm.

Flaring

Widening at the hem of a skirt, dress, etc.

Gathering

Gathers are soft folds of fabric, closely spaced near the seam line.

Gibson pleat

It is a tuck made in the sleeve where it joins the armhole and continues downwards; its width is about half that of the bust dart.

Godet

Typical triangular insets for skirts, lending fullness and flare.

Gusset

A small lozenge of fabric inserted in fitted kimono sleeves helping to provide more freedom of arm movement.

Inverted pleat

The interior of the pleat of a skirt, a blouse, a dress, etc.

Kick pleat

A pleated opening at the hemline of a skirt or dress, etc. made for practical (freedom of movement) and aesthetic purposes.

Kimono sleeve

Type of sleeve cut as one with the body of the garment.

Lapels

Folds on the front of the jacket, coat, or overcoat, extending from the collar. May take various shapes, the most common being notched, peaked or shawl.

Motifs

These are the details that characterize the style of pieces of apparel.

Neckline

The opening in the upper part of a dress, a top, a shirt, etc. through which the head passes when putting it on.

The neckline comes in various forms: square, V-shaped, heart-shaped, hooded, etc.

Notches

Small incisions made on the edges of paper patterns using a special punch, indicating various points of reference and match points.

Perfect drape

Positioning of the pattern perfectly on the straight grain, to obtain flawless apparel.

Piping or collar band

Strip of fabric linking the shirt body and the collar in men's shirts.

Placket

Strip of fabric concealing the buttons on jackets, shirts, dresses, etc.

Pleats

Folds in the fabric, made in apparel for technical purposes. They can be box pleats, Dior kick pleats, unpressed pleats, inverted pleats, accordion pleats, etc.

Pocket flaps

Strips of fabric covering pocket openings.

Raglan sleeves

Sleeve with diagonal seams extending from the collar to under the arms.

Reinforcement

This is the canvas, or other material, inserted between the garment's fabric and the lining to strengthen a part or support areas subject to greater stress, such as: openings, belts, pockets, necks, sleeves, shirt cuffs, plackets, etc.

Sizes

Numbering system used in apparel, indicating people's measurements, proportions and stature.

Skirt Yoke

Fitted or shaped pattern piece inserted at the top of a skirt providing support for a looser or gathered part.

Sleevehole

The lower part of the bodice armhole of a shirt, a dress, etc. can be adjusted for depth.

Straight grain

The direction of the grain corresponding to the warp of the fabric. The straight grain must be indicated on every single pattern piece.

Yoke

Fitted or shaped pattern piece inserted at the upper part of a shirt, dress, or overcoat, running across the shoulders, in front or in back.

FIGURE MEASUREMENTS

INTRODUCTION

The first step, before anything else, in creating the pattern for a made-to-measure garment, is the taking of the subject's measurements.

A correct procedure in this respect is the single most important factor in the successful completion of the project, and helps to avoid any nasty mishaps that can cause problems and waste time. The precautions to take for getting good measurements are the following:

- Make sure that the person is in a natural and relaxed standing position.
- Observe whether the person is bundled up in uncomfortable clothes that could interfere with the measurements.
- Measurements should not be taken over the jacket, although that could be useful for making an overcoat.
- Women's overcoats, unlike men's, require less of an increase for a proper fit, since they are normally in place of, and not over, the jacket.

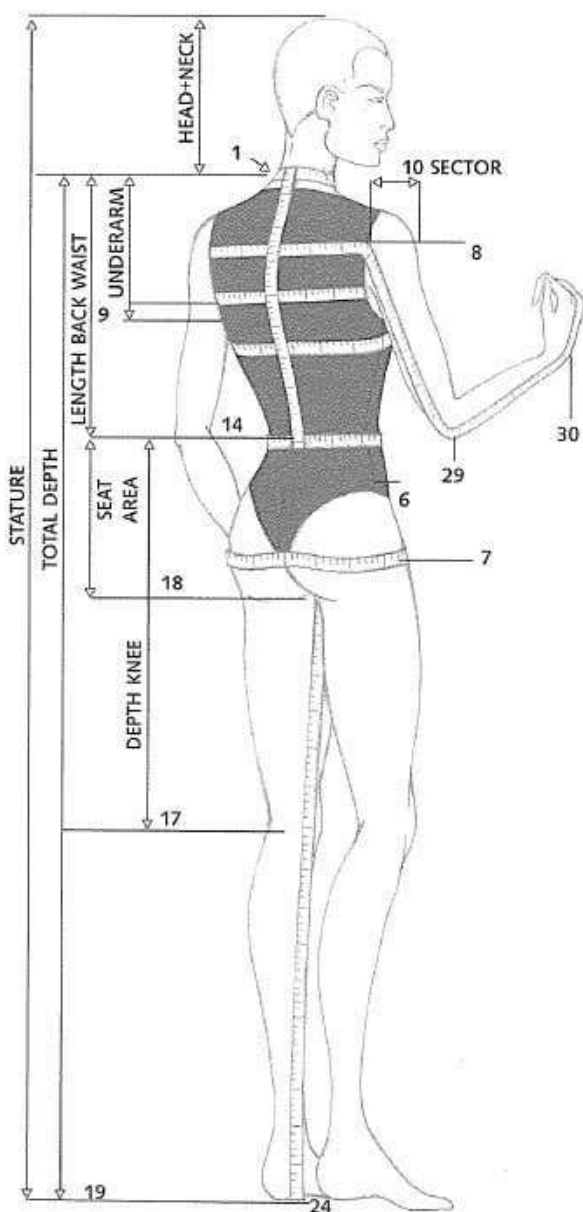
- The measurements should be noted down precisely and with the help of a special chart that contemplates all the measurements needed.

- Before taking the measurements, it is a good idea to tie a cord around the person's waist, checking to make sure that it is perfectly horizontal. This position, within the context of the measurements, is an important point of reference for all the other measurements.

- The measurements should be made using a good measuring tape that shows no fraying and clearly visible numbers.

- The tape measure should adhere to the body, not too tight and not too loose.

- The measurements should be noted down without additions for comfort of fit, since that step is done afterwards using a chart that contemplates the type of garment to be made and the fabric to be used for it.

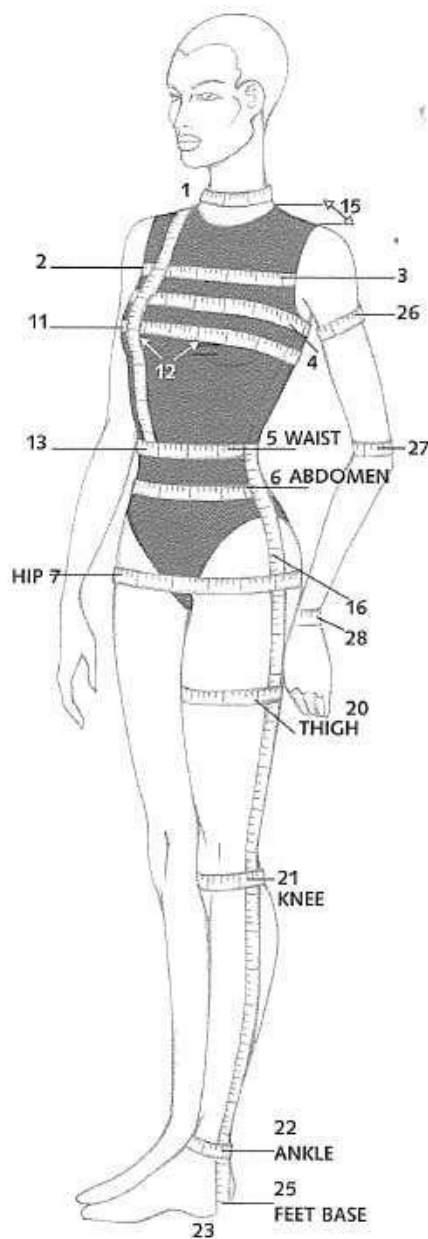


MEASUREMENTS

- 1 - NECK CIRCUMFERENCE
- 2 - TORSO CIRCUMFERENCE
- 3 - FRONT TORSO WIDTH*
- 4 - BUST CIRCUMFERENCE
- 5 - WAIST CIRCUMFERENCE
- 6 - ABDOMEN CIRCUMFERENCE*
- 7 - HIP CIRCUMFERENCE
- 8 - BACK SHOULDERS WIDTH
- 9 - UNDERARM LEVEL
- 10 - WIDTH SECTOR*
- 11 - BUST DEPTH
- 12 - BUST DIVERGENCE
- 13 - FRONT WAIST LENGTH
- 14 - BACK WAIST LENGTH
- 15 - SHOULDER LENGTH
- 16 - SIDES DEPTH
- 17 - KNEE DEPTH
- 18 - SEAT DEPTH
- 19 - TOTAL DEPTH MEASUREMENT
- 20 - THIGH CIRCUMFERENCE
- 21 - KNEE CIRCUMFERENCE
- 22 - ANKLE CIRCUMFERENCE
- 23 - OUTER LEG LENGTH
- 24 - INSIDE LEG LENGTH
- 25 - WAIST - FEET BASE LENGTH

MEASUREMENTS OF SLEEVE

- 26 - UPPER ARM CIRCUMFERENCE
- 27 - ELBOW CIRCUMFERENCE
- 28 - WRIST CIRCUMFERENCE
- 29 - ELBOW LEVEL
- 30 - LENGTH SLEEVE



INDUSTRIAL CHART OF WOMEN'S MEASUREMENTS

WOMEN'S SIZE CHART WITHOUT COMFORT ALLOWANCES

Measurements of circumference						
		38				
SIZES	40	42	44	46	48	50
Chest circumference	84	86	89	92	96	100
Bust circumference	89	92	96	100	105	110
Waist circumference	66	68	72	76	81	86
Hip circumference	89	92	96	100	105	110
Front torso width *(including dart)	36,1	37,1	38,9	40,5	42,5	44,5
Back shoulders width	35,3	36,5	37,9	39,5	41,5	43,5
Neck circumference	36	37	38	39	40	41
Neckline back	7,5	8	8,5	9	10	11
Measurements of length						
STATURE	164	166	168	170	172	174
Bust divergence	17	18	19	20	21	21
Shoulder length	12	13,5	13,5	14	14,5	15
Back waist length	39,1	40	40,9	41,8	42,7	43,6
Front waist length	40,4	41,5	42,6	43,7	44,8	45,9
Bust depth	21,8	22,5	23,2	23,9	24,6	25,1
Sides depth	19,6	20	20,4	20,8	21,2	21,6
Seat depth	23,5	24	24,6	25,2	25,8	26,5
Knee depth	57,5	58,5	59,5	60,5	61,5	62,5
Outer leg length	102	104	105	106	107	108
Upper arm circumference	28	29	30	31,5	33	35
Wrist circumference	18	19	20	20	21	21
Sleeve length	57	58	59	60	61	61

* Control measurements

COMFORT ALLOWANCES BASED ON THE TYPE OF APPAREL

CLOTHING TYPES	Swimsuits and Leotards	Tops and Bodices	Shirt Suit and Vest	Bolero and fitted jacket	Loose jacket Fitted overcoat	Jacket Parka	Duster Raincoat Cloak	Padded Parka
Torso circumference	-4 / -2	0 / 2	4 / 8	10 / 12	14 / 16	18 / 20	22 / 24	28/32
Bust circumference	-4 / -2	0 / 2	4 / 8	10/12	14/16	18/20	22/24	28/32
Waist circumference	-2,5/-1	0/-1,5	2,5/4	5/6	8/10	-	-	-
Hips circumference	-4/-2	0/2	4/8	10/12	14/16	18/20	22/24	28/32
Upperarm circumf.	-1,5/-0,5	0/1	1/1,5	1,5/2	2,5/5	3,5/7	4,5/8,5	6/10
Back shoulders width	-1,5 / -0,5	0 / -0,5	1 - 2	2,5 - 3,5	3,5 - 4	4,5 - 5	5 - 5,5	7 - 8
Front torso width	-1,5 / -0,5	0 / -0,5	1 - 2	2,5 - 3,5	3,5 - 4	4,5 - 5	5 - 5,5	7 - 8
Front and back waist length	-	-	-	1	2	2	2	3/4

SYMBOLS AND ABBREVIATIONS

In the execution of the pattern, as each piece is completed, it must be marked. It is necessary to write down all the indications that might be useful in the garment's cutting and assembly phases.

It is very important to indicate on each pattern piece what it is: bodice, front, yoke, sleeve back, shirt cuff, sleeve. The straight grain is shown by means of a long line with arrows at either end (\longleftrightarrow) or with a fold line along the grain.

The fold is usually the line down the centre front or centre back.

A symbol commonly used in place of the words "Position along the fabric fold" consists in two arrows at right angles (∇) to one another, turned toward the area to be positioned on the fold. The lines of the centre front and centre back can be marked "C.F." and "C.B."

Notches are placed on the edges of adjacent pattern pieces, which makes it easier to match the seams of the various pieces during their assembly, or they can be used as a guide for the gathers, folds, etc.

They are lines that are perpendicular to the seams. Once the pattern piece has been cut, a small 3 mm notch is snipped in the fabric of the seam allowance for each notch indicated in the pattern.

Notches have to be made wherever it is thought they might be useful. Their number (simple, double, triple notch) and their position can be varied to ensure precision.

Mark with a notch the point where the fastening is, and write down any particular instructions about the zipper or buttons.

Indicate the ornamental details, as well as the positioning of the pockets.

Ornamental stitching can be marked with a broken line wherever it is positioned. If the pattern is made without seam allowances, write down the fact that they must be added.

Erase any unused lines on the finished paper pattern and write any other instructions that might at some point be useful.

The name of the person or the company for which it was made, together with the date of its realization, should be written down.

Then, the pattern should be conserved in a large envelope.

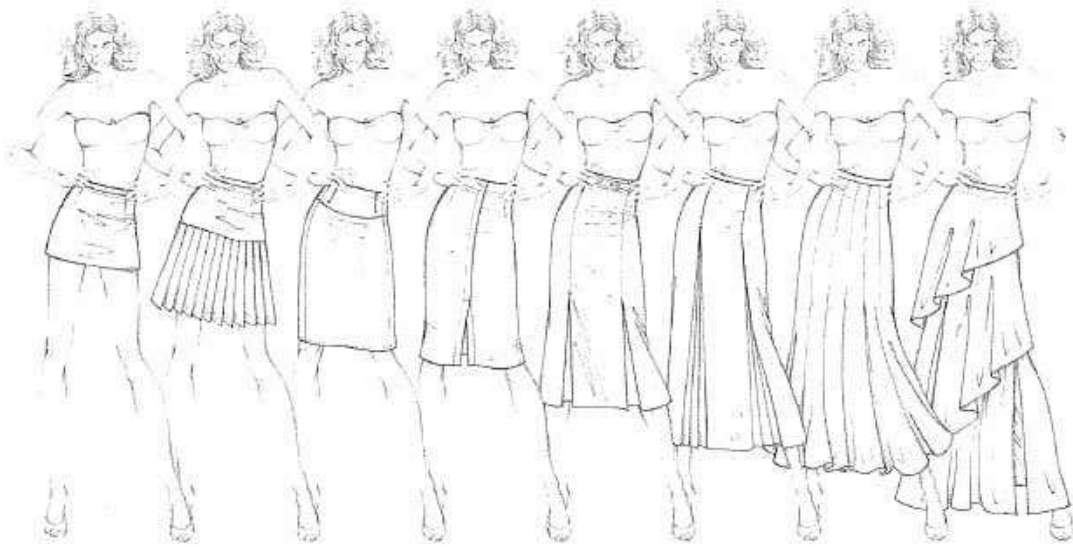
SYMBOLOLOGIES

SYMBOL	DESCRIPTION
	Side to position on the fold
	Pattern grainline
	Line indicating pattern modification or seam allowances
	Notches or indication of grain or seam line
	Darts
	Centre or fold line
	Pleats
	Position of buttonholes and buttons

ABBREVIATIONS

Adj. = Adjust	Gath. = Gather
B. = Bias	N.P. = Neck point
B. in O. = Back in one piece	O. = Open
BCK = Back	Ov. = Overlap
BFC = Back facing	Pl. = Placket
BH = Buttonhole	P. D. = Perfect drape
C. = Close	R. S. = Right side
C. D. = Closed dart	S.A. = Seam allowance
Cr. = Cross	S. P. = Shoulder point
C. F. = Centre front	S.G. = Straight grain
C. B. = Centre back	S. S. = Side seam
C. Sh. = Centre shoulder	St. St. = Straight stitch
D. = Depth	F. in O. = Front in one piece
Ds. = Discard	U. P. = Underarm point
FRT = Front	W. B. = Waistband
FC = Facing	W. S. = Wrong side
FFC = Front facing	ZZ = zigzag

SKIRTS



Skirts	32	Back-wrap skirt	64
Skirt length	33	6-panel skirt	65
Skirt typologies	33	8-panel skirt	66
Pattern terminology	34	Construction of the single panels	67
Skirt sizes	35	12-panel fancy skirt	68
Basic pencil skirt block	36	Panel for 18-panel skirt	69
Pencil skirt darts	37	Pleated skirts	70
Transformation of the skirt darts	38	The kilt	71
Pencil skirt pattern layout	39	Pleats for skirts	72
Dressmaker's assembly of the skirt	40	Fancy pleated skirt	73
Skirt with shifted side seams	42	Fancy draped skirt	74
Kick pleats	43	Asymmetrical skirt	75
A-line skirt	44	Flounced skirt	76
Flared a-line skirt	45	Circular skirts	77
Gathered skirt	46	Basic quarter-circle skirt block	78
Skirt with central inverted pleats	47	Quarter-circle skirt pattern layout	79
High- and low-waisted skirt	48	Quarter-circle skirt with single seam	80
Skirt with two pleats	49	Half-circle skirt	81
Skirt with two inverted pleats	50	Basic full-circle skirt block	82
Skirt with accordion pleated panel	51	Circle skirt pattern layout	83
Skirt with yoke	52	Quarter-circle skirt with 8 pleats	84
Skirt with shaped yoke	53	Quarter-circle skirt with 6 pleats in front	85
Skirt with integral waistband	54	Quarter-circle skirt with inverted pleat	86
Drop skirt with drop-front panel	55	Quarter-circle skirt with flared box pleats	87
Skirt with asymmetrical inside pockets	56	Flounced skirt	88
Skirt with welt pockets	57	Adaptation of skirt with godet flounces	89
Maternity skirt	58	Skirt with fancy tiered flounces	90
Fuller maternity skirt	59	Tiered circle skirt	91
Peg-top skirt	60	Asymmetrical circle skirt	92
High-waisted asymmetrical skirt	61	"Square" circle skirt	93
Asymmetrical skirt	62	Yoked sunburst skirt	94
Front-wrap skirt	63	Correcting figure defects for pencil skirts	95

SKIRTS

INTRODUCTION

The skirt is the part of female attire that covers the lower half of the figure, from the waist downwards, wrapping the hips and both legs.

This garment has primordial origins, and in fact, it appears, in various styles, in frescos, paintings, sculptures and writings from prehistoric times on.

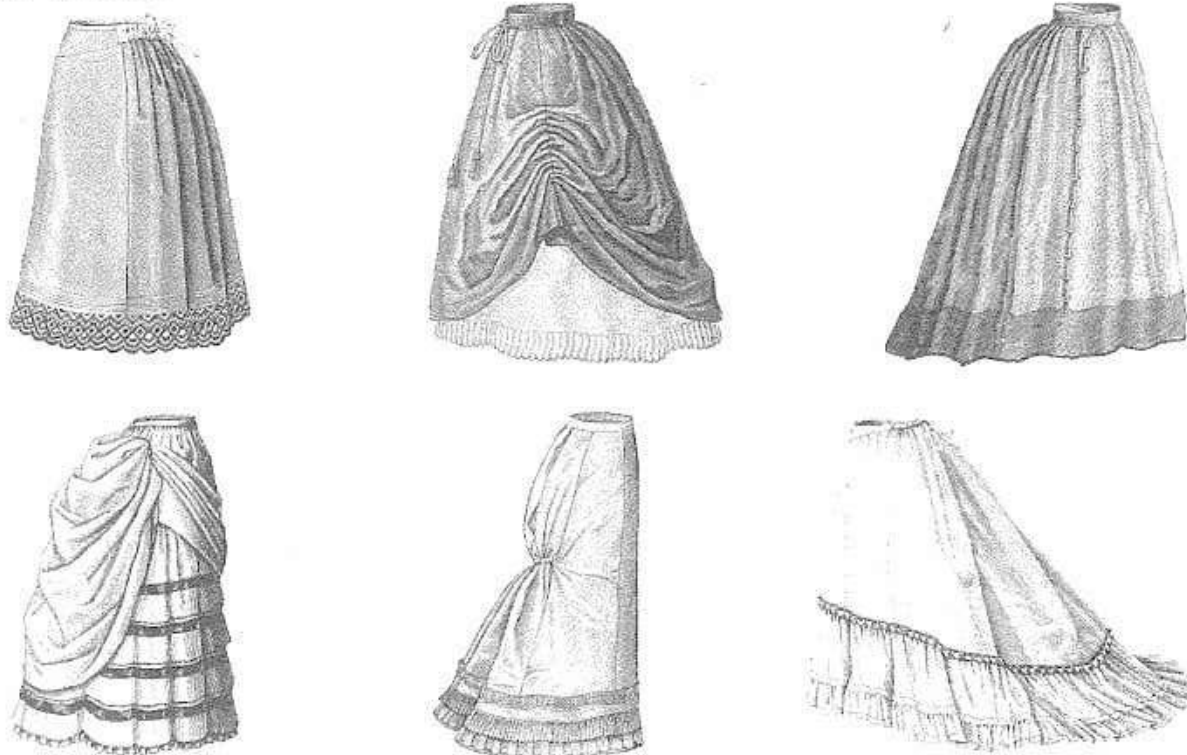
There is, for example, the *shenti*, a sort of linen kilt that all Egyptians wore.

In the year 1200, the name *gonnella* appears, but in any case it refers to a full-length garment, for both men and women.

Towards the close of the 15th century, the tunic (*gonna*, *gonnella*, or *sottana*) is divided horizontally in two.

The skirt today is a very important article of clothing and each season fashion designers include it in their collections with the most varied forms and lengths.

SKIRTS IN THE 1800s



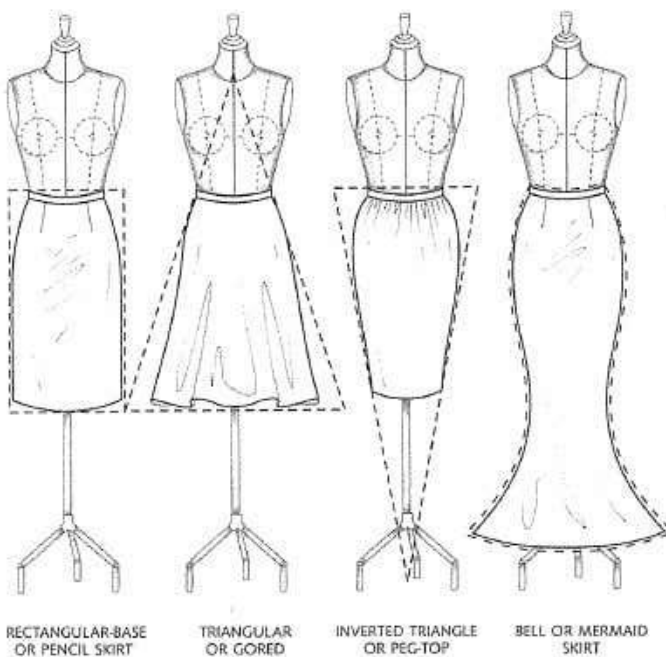
THE MAIN FORMS OR SILHOUETTES OF SKIRTS

There are essentially four main skirt shapes: *Rectangular* (cylindrical), *Triangular* (Gored, à Godet), *Inverted Triangle* (Peg-top), and *Bell-shaped* (Mermaid-style).

All the other skirt styles derive from these four main shapes.

From a rectangular-base or pencil skirt, you can obtain all the other shapes, while the triangular or gored skirts can be made using the construction of the $\frac{1}{4}$ -, $\frac{1}{2}$ -, or full-circle skirt.

- The pencil skirt is rectangular from the waist down.
- The gored skirt starts at the waist (or just below) and opens out down to the hem; its fullness depends on the design.
- The peg-top skirt sheathes the hips and narrows at the hem, to varying degrees, somewhat impeding the wearer's stride.
- The bell or mermaid skirt sheathes the hips and legs (permitting movement), and flares at the bottom.



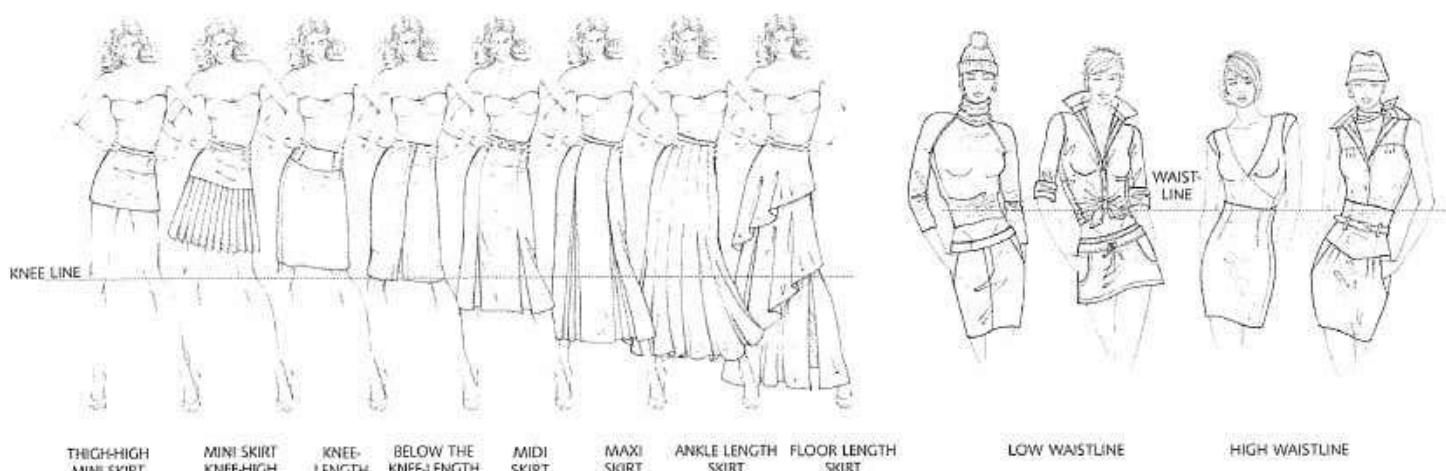
SKIRT LENGTH

SKIRT LENGTH

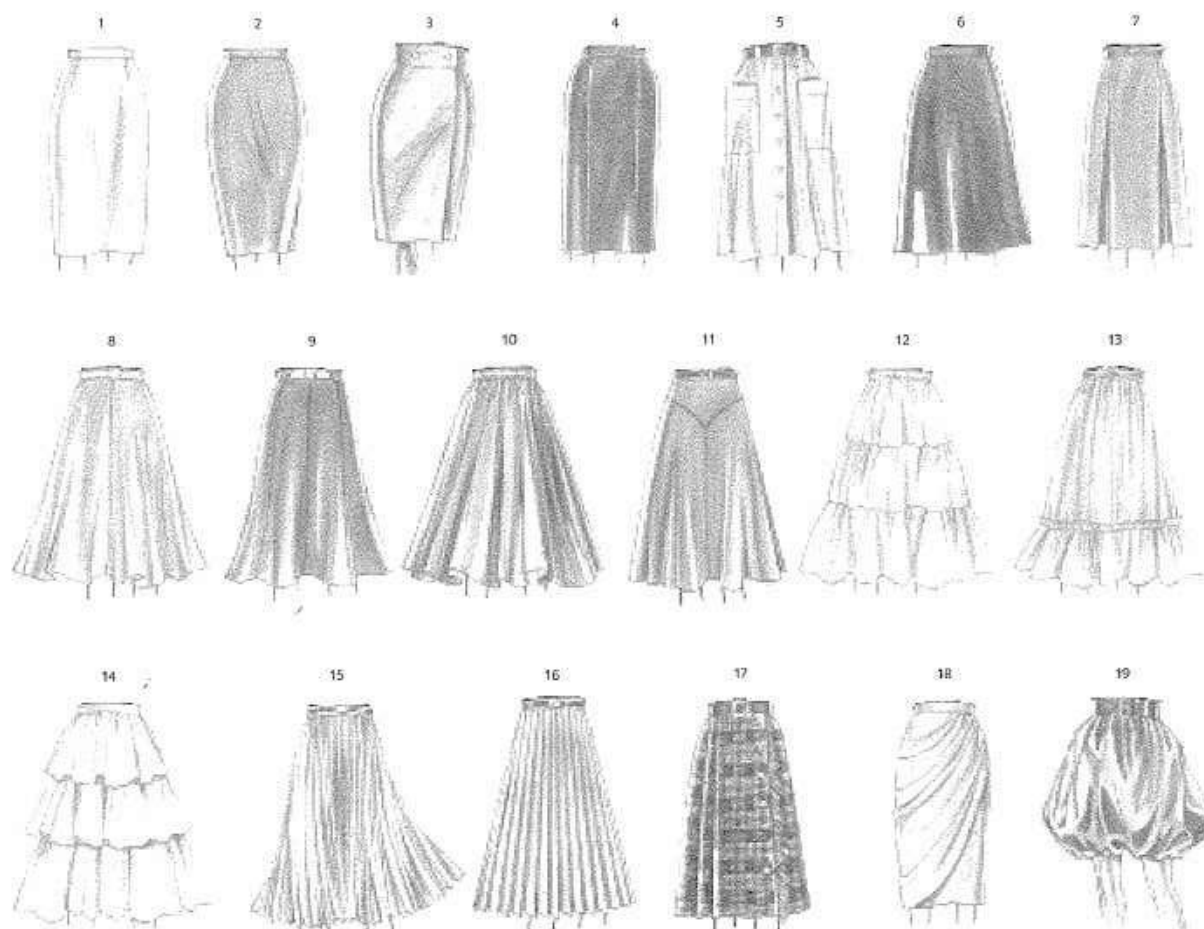
The skirt is a garment that covers the figure from the waist down, and it is the article of clothing most subject to changes, especially as far as length and waistline.

In fact, with respect to the knees, the length can vary: above,

up to the thighs, below, or down to the floor, it depends on the fashion trends and the designers' decisions. The waistline, instead, can be set low, if it is below the navel; or high, if it rises above the normal position.



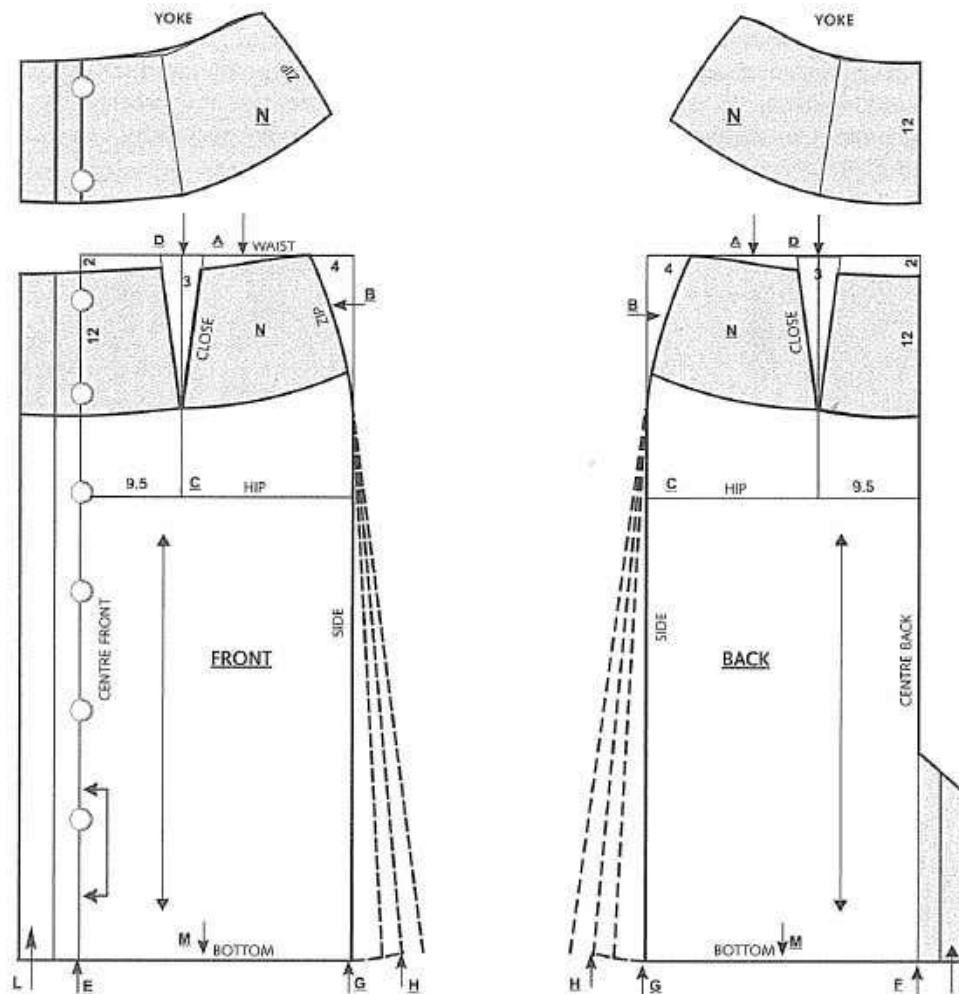
SKIRTS TYPOLOGIES



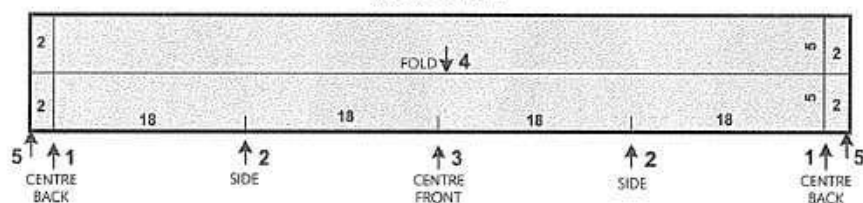
- 1) Pencil skirt block 2) Pencil skirt tight 3) Front-wrap skirt 4) 4-Panel skirt 5) Open-front skirt 6) A-line skirt
- 7) Skirt with kick pleats 8) Half-circle skirt block 9) 6-Panel gored skirt 10) Full-circle skirt block 11) Skirt with yoke
- 12) Skirt with flounces 13) Skirt with ruffled hem 14) Skirt with overlapping flounces 15) Skirt with small knife pleats
- 16) Pleated skirt 17) Kilt skirt 18) Draped skirt 19) Bubble skirt.

PATTERN TERMINOLOGY

OF THE PENCIL SKIRT



WAISTBAND



PATTERN TERMINOLOGY OF THE SKIRT

- A) Waist circumference - Waistline - Waist.
- B) Side - Side part.
- C) Hip - Hip line.
- D) Darts or Tucks - Wedge-shaped.
- E) Centre front - Half front.
- F) Centre back - Half back.
- G) Side Division - Side line.
- H) Flare - Gored - Fit.
- I) Shear - Inverted pleat.
- L) Fastening - Closure.
- M) Bottom - Bottom line - Hem.
- N) Yoke.

WAISTBAND

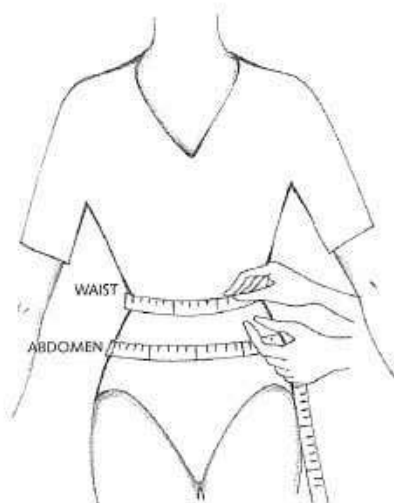
- 1) Centre back.
- 2) Side positioning.
- 3) Centre front.
- 4) Fold line.
- 5) Extension for the overlap.

SKIRT SIZES

INTRODUCTION

The personal measurements to note down for the construction of a skirt are: *waist circumference - hip circumference - hip to waistline - skirt length - and, just to make sure, abdomen circumference*. Before taking the measurements, tie a ribbon or a cord around the waist and one around the hip.

The measurements should be marked down immediately on the customer's personal chart, together with the date and weight, in order to avoid errors or imprecision, then these measurements should be checked against the pattern made, before proceeding to the positioning of the pieces and the cutting of the fabric.



WAIST AND ABDOMEN CIRCUMFERENCE

WAIST CIRCUMFERENCE

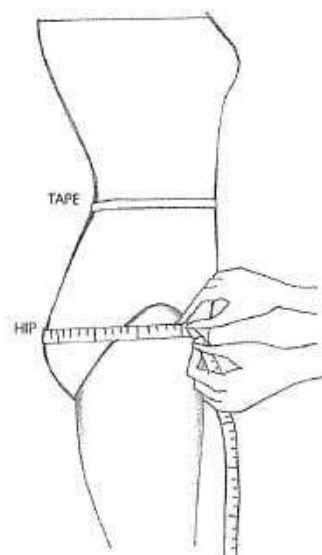
The circumference of the waist is measured by running the tape around the person at the narrowest part of their waist, as indicated in the figure.

In making the pattern, this measurement should be adjusted for comfort of fit (0-2 cm) and divided by 2.
E.g.: circumference waist $(70 + 2) : 2 = 36$.

ABDOMEN CIRCUMFERENCE

This measurement is considered just for the purpose of double-checking, but it is better and safer to take it.

To do this, wrap the tape around the fullest part of the abdomen, about 8 cm from the waist.

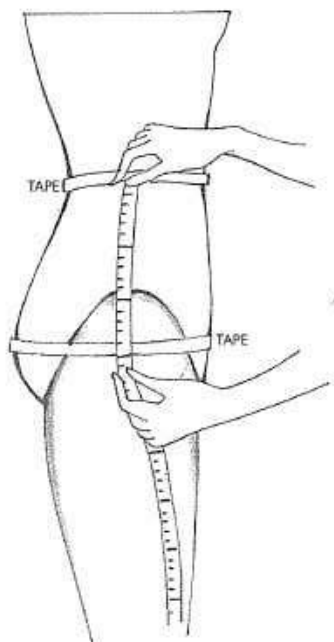


HIP CIRCUMFERENCE

HIP CIRCUMFERENCE

It is taken by looping the measuring tape around the fullest part of the hip.

When making the pattern, this measurement adjusted for comfort (+ 0-2 cm) should be divided by 2.
E.g.: Hip circumference cm $98 + 2 = 100 : 2 = 50$.



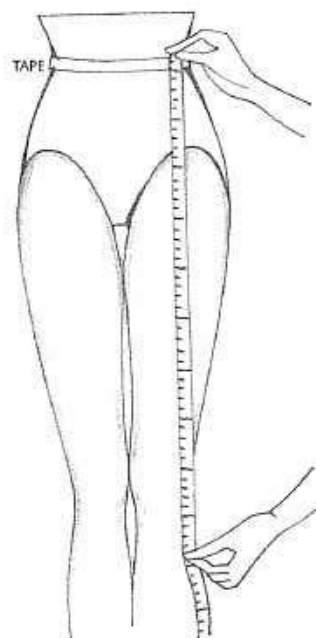
WAISTLINE TO HIP

WAISTLINE TO HIP

From the tape tied around the waist to the fullest point of the hip, where another tape should be positioned.

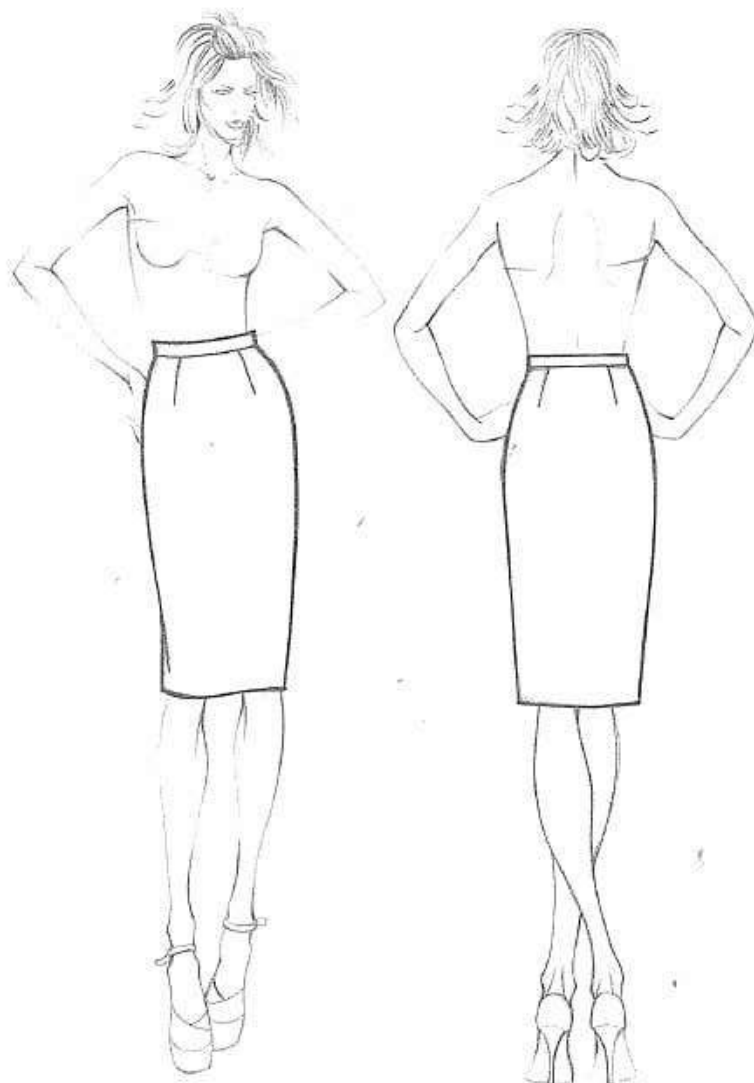
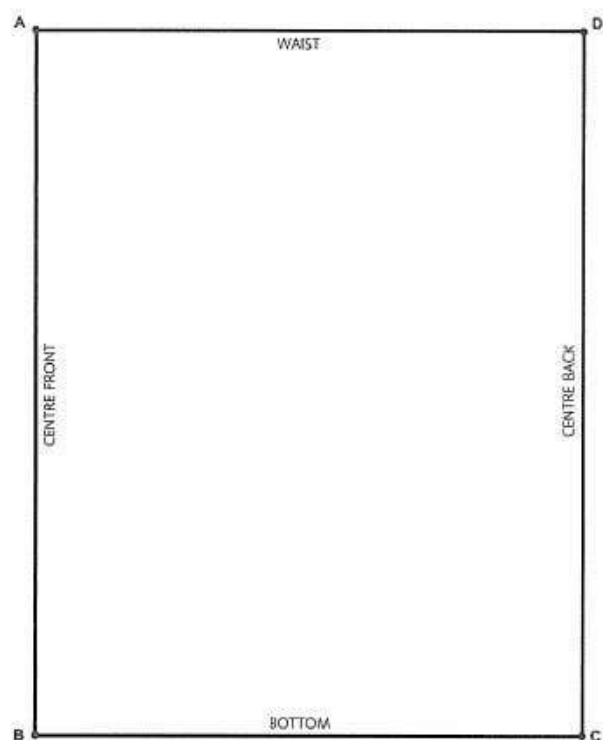
SKIRT LENGTH

Starting from the tape marking the waist, measure the desired length or in accordance with the fashion sketch.



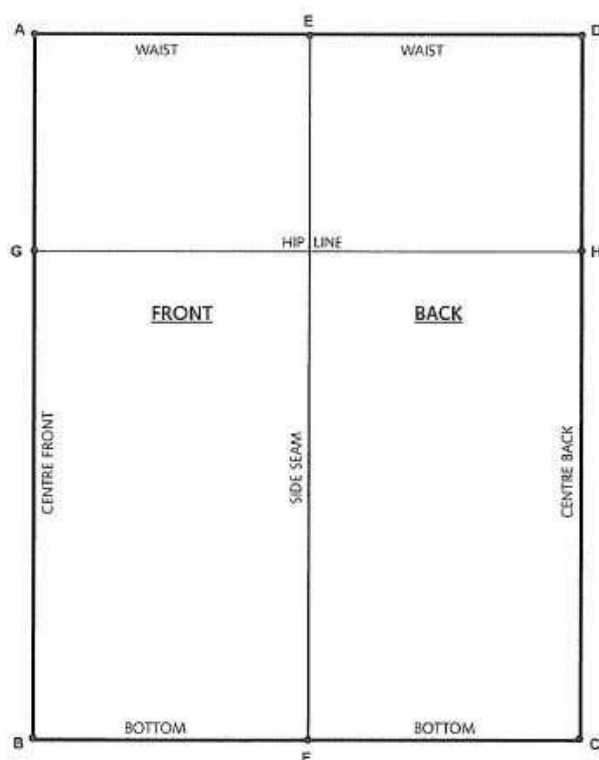
SKIRT LENGTH

BASIC PENCIL SKIRT BLOCK

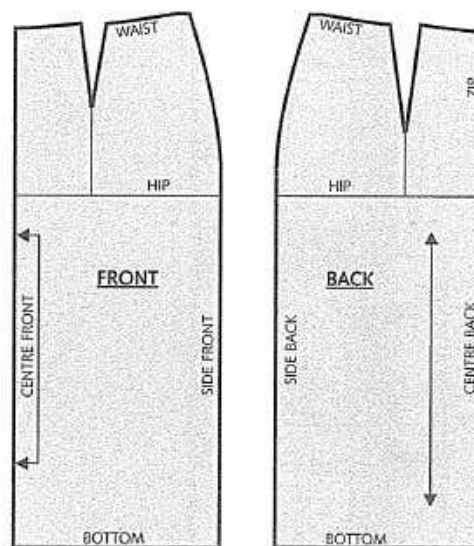
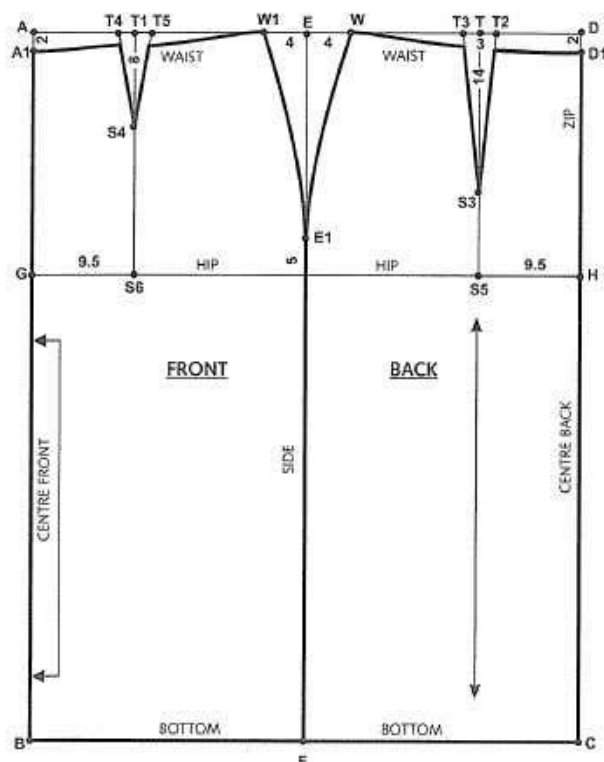


BASIC CONSTRUCTION

- Draw a rectangle A-B-C-D, with:
- A-D = Hip circumference + ease allowance : 2
(e.g.: $98 + 2 : 2 = 50$) WAISTLINE.
- B-C or A-D ENDS.
- A-B = desired length (e.g.: 65 cm) CENTRE FRONT.
- C-D like A-B CENTRE BACK.
- A-E half of A-D.
- Draw E-F SIDE SEAM.
- A-G Waist-Hip length.
- Draw G-H HIP LINE.



PENCIL SKIRT DARTS



WAIST DARTS

Since the circumference of the hips is usually greater than that of the waist, it is necessary to take away the excess in order to tailor the garment to the wearer's figure.

To get the right proportions on the pattern, we create "darts" at the waistline, wedge-shaped folds coming to a point at the fullest part, that is near the hip line, with the base at the top, towards the waist.

- A-T1 and D-T, the centre of the dart, should be marked at a distance equalling $\frac{1}{2}$ the bust point distance, from the centre front and back (e.g.: 19 cm : 2 = 9.5 cm).

To calculate the width of the darts, subtract half of the Waist Circumference from half the Hip Circumference: the difference must be divided between the curves of the sides and the front and back darts.

For example: $\frac{1}{2}$ Hip Circumference 50 cm less $\frac{1}{2}$ Waist Circumference 36 cm = 14 cm total excess to use in the darts.

- E1-W and E1-W1 is the space to distribute between the gradual curve of the side seams from the hip line to the waistline (in this case 4+4 cm).

- T2-T3 and T4-T5 is the size of the darts in front and in back (in this case: in front 3 cm and in back 3 cm).

WAISTLINE CURVE

To create the right curve for the shape of the waist:

- Lower: A-A1 and D-D1 by 2cm.

- Join A1-W1 and D1-W with a curved line.

WAISTBAND

Draw a rectangle A-B-C-D, with:

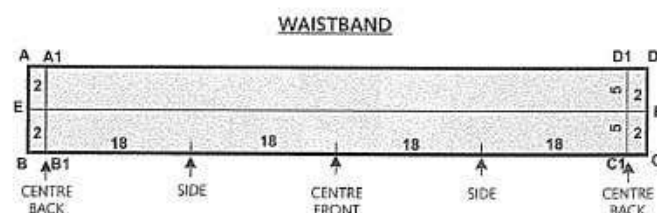
- A-B equal to double the height of the waistband (10 cm).

- B-C equal to the Circumference Waist + 4 cm, for the closure overlap (2 cm per side).

- A-E half of A-B.

- Draw E-F.

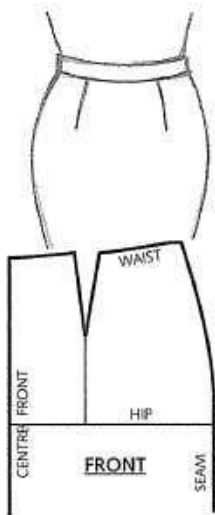
- A-A1 and D-D1 cm 2.



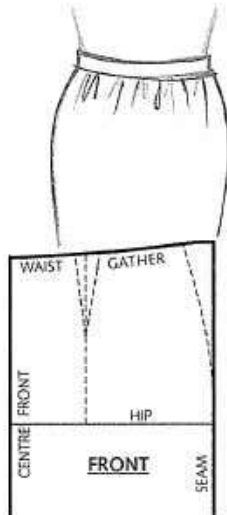
TRANSFORMATION OF THE SKIRT DARTS

The are variations and adjustments that can be made to the waist darts of the pencil skirt, if necessary.
The main variations are: - elimination of the darts in favour

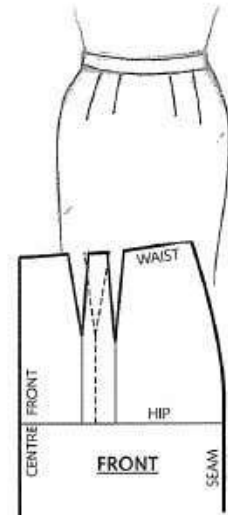
of gathers - doubling the front darts - skewing them in various positions - made to join the seams and motifs in various ways.



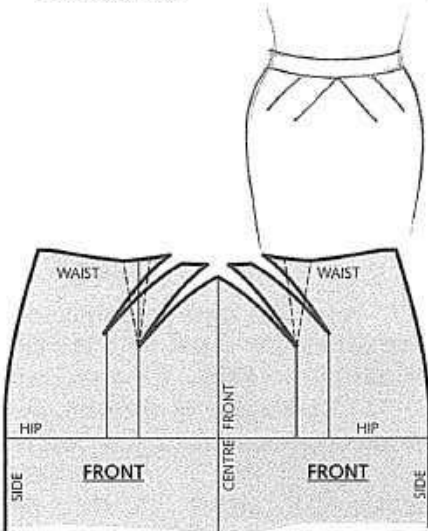
PENCIL SKIRT DART



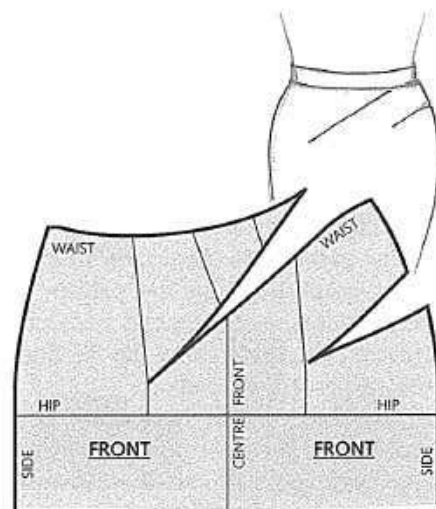
GATHERING AT THE WAISTBAND



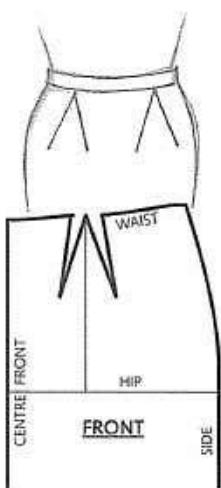
PENCIL SKIRT WITH TWO DARTS



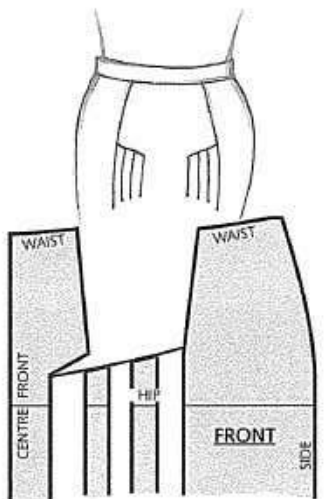
SKIRT WITH TWO DARTS ON THE BIAS



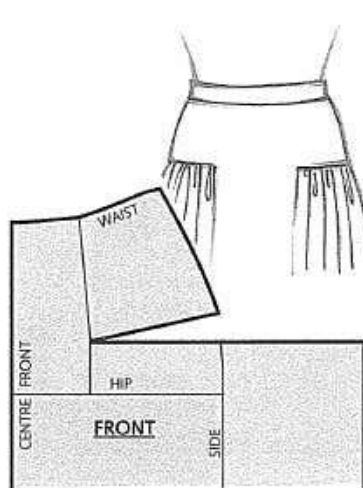
SKIRT WITH ASYMMETRICAL DARTS



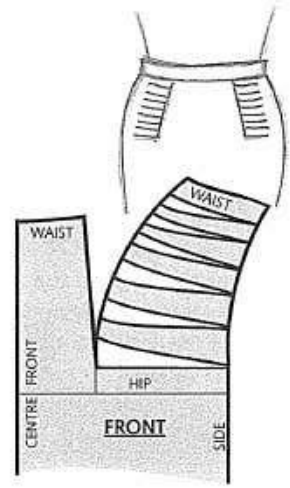
TWO CONVERGING DARTS



DARTS INCORPORATING SEAMS AND GATHERS



DARTS MOVED TO THE SEAMS



OPEN DARTS FOR GATHERS

PENCIL SKIRT PATTERN LAYOUT

PATTERN LAYOUT

After making the paper pattern and double checking everything, we proceed with its layout on the fabric, which has already been preshrunk by laundering, vapour, or decatizing, in order not to have any surprises at first washing.

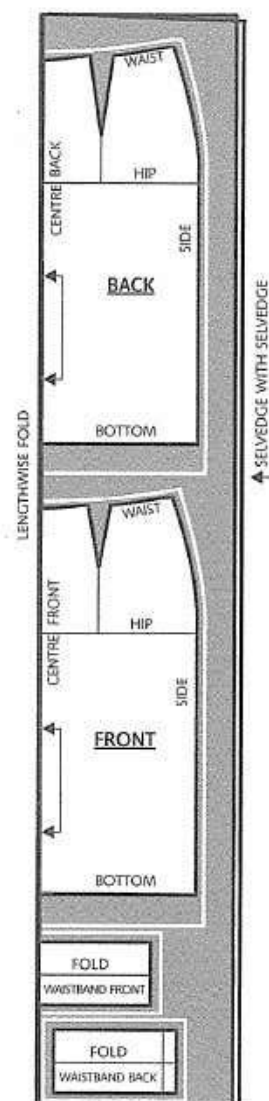
For the *dressmaker's layout*, the pattern does not need any alteration, but the outlines must be drawn in chalk directly on the fabric, leaving seam allowances suitable to the layout and the type of fabric, as explained above, and marking the reference points for the assembly of the pieces.

For the *industrial layout*, first of all the pattern has to be industrialized, that is, the seam allowances, all the notching, and the reference markers for the successive phases of work have to be added to it.

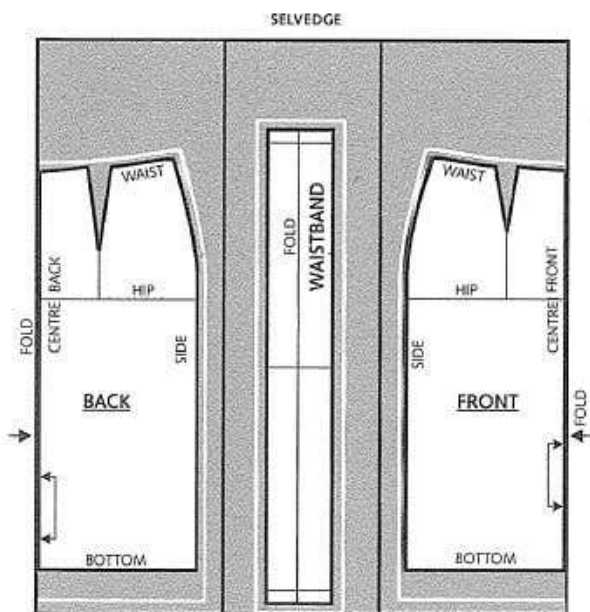
The pencil skirt, like all other patterns, can be laid out on the straight of grain, on the cross-grain, or on the bias.

In laying out the paper pattern, close attention must be paid to the marks already made on it: the grain; the side to be positioned on the fold of the fabric, etc.

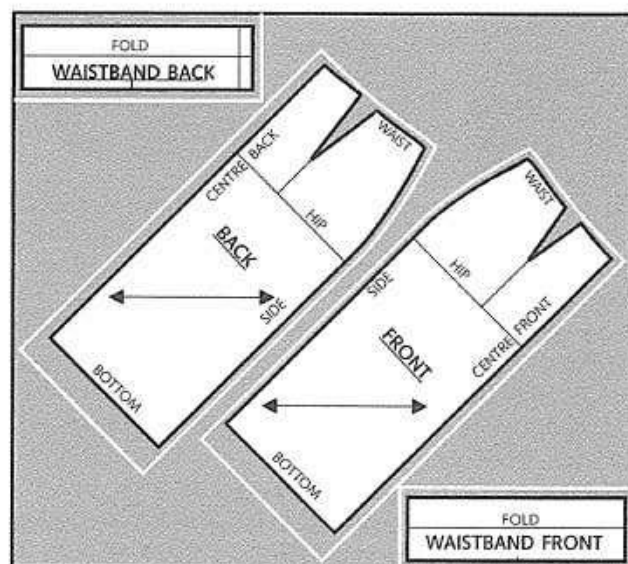
Certain details about the fabric should be checked, the kind of weave, its nap, and the kind of decorative pattern it has, in order to establish the right direction of the pattern pieces, and, consequently, the length of fabric to purchase for the optimal layout.



STRAIGHT OF GRAIN LAYOUT
70-80 CM HIGH FABRIC
(full front and back)



CROSS-GRAIN LAYOUT - DOUBLE FOLD
(full front and back)



BIAS LAYOUT - DOUBLE FABRIC

DRESSMAKER'S ASSEMBLY OF THE SKIRT

The steps the dressmaker takes to make the skirt may be summed up as follows:

- 1) Baste the skirt for a possible fitting.
- 2) Sew the darts.
- 3) Sew the seams.
- 4) Sew in the zipper.
- 5) Make the hem.
- 6) Insert the lining, prepared separately.
- 7) Add the waistband, if called for.

Basting the skirt

The skirt can be basted in the following order:

- Baste the darts.
- Sew all the seams.
- Baste the zipper.
- For the fitting, just baste the waistband beneath the waist edge, without folding it.

SEWING THE DARTS AT THE WAIST

Perfect darts are straight, smooth, no wrinkling at the tip, and perfectly symmetrical.

- Indicate the darts using the marker most suitable for the fabric.
- Indicate the tip of the dart with a horizontal line or a tailor's tack.
- Fold the dart down the central line matching the seams and fastening with straight pins or making tailor's tacks.
- Sew along the seam line as indicated, shortening the stitch length towards the end.
- Iron the darts folded towards the centre, without creasing the fabric beyond the tip.

Open darts

Wider darts, and when using heavier fabrics, are often opened up along the seam line darts and trimmed to about 1.5 cm; they are cut open to within 1-1.5 cm of the tip and ironed flat.

INSERTING THE ZIPPER

The zipper must be inserted perfectly if you do not wish to run into problems or lose that elegant, professional look.

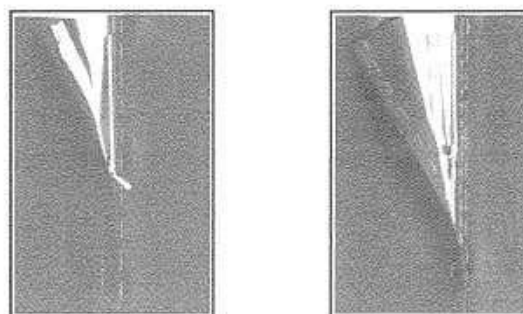
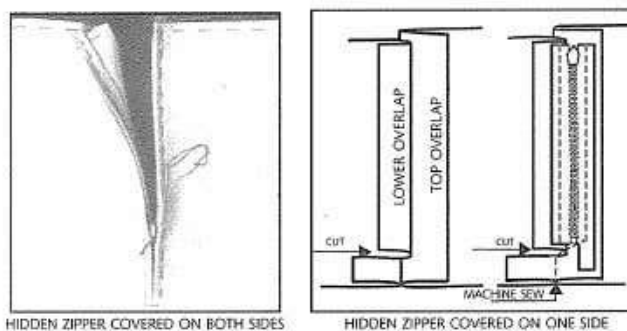
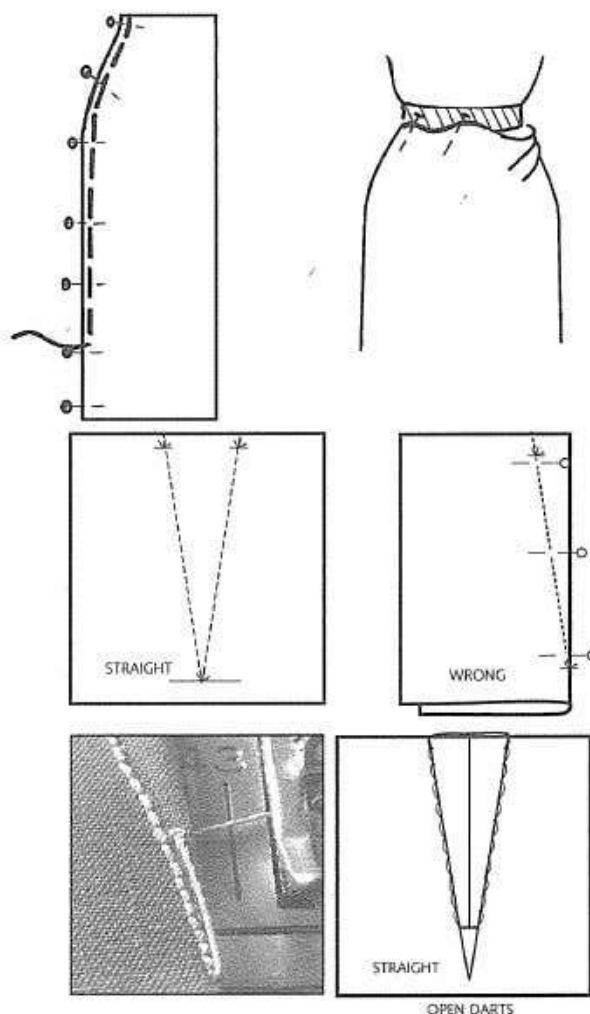
Hidden zipper on both sides

- Sew the opening with long stitches.
- Iron the seam and remove the stitches.
- Baste the zipper starting from the top, in such a way as to cover the row of teeth.
- Open the zipper and machine sew using the zipper foot, starting from the left side at the top. Towards the end of the opening, the zipper should be closed so that the slider does not impede the stitching.

Hidden zipper covered on one side

- Make the lower edge protrude slightly, forming the lower portion of the overlap.
- The seam allowances should be roughly 2.5-3 cm.
- Cut the lower edge margin at the end of the opening, almost to the seam and fold it at a distance of 0.5 cm from it.
- Attach the zipper sewing close to the teeth.

- Baste the top of the overlap on the second zipper tape, keeping the zipper closed.
- Machine sew keeping the distance regular and finishing off obliquely.



THE DRESSMAKER'S HEM

The skirt's hem should be marked at the desired length while wearing the garment or with it on the mannequin, using a hem-marking device, or in the absence of that, a ruler for measuring from the floor up.

The depth of the hem depends on the type of fabric used and the pattern style, whether it is casual or elegant: it can range from 3 to 7.5 cm.

Lighter, transparent fabrics are finished with a rolled hem, while softer knits have a rather narrow hem to keep from getting floppy.

The hem may be done using various techniques:

1) *folded hem*; 2) *rolled hem*; 3) *hem finished with some kind of trim*; 4) *edged hem*; 5) *pinked with pinking shears and fastened by means of iron-on tape*; 6) *faux hem*.

- The folded hem is the edge folded up once, and then again, and finished with the blind stitch, after basting.
- The rolled hem is used with the lightest fabrics, such as chiffon, voile, organdy, etc.
- The hem finished with trim is done laying a strip of silk or cotton trim over the folded hem basted along the fold.
- The edged hem is bound with ribbon, braid, or bias tape.
- The pinked hem is done on woolens and fabrics that do not fray, and requires pinking shears. A blind stitch can also be used here.
- The faux hem is used when there is not sufficient fabric to make a normal hem, attaching a strip of bias or normal tape, or directly attaching the lining to the hem, right side to right side of the fabric and turning it up by a half-centimetre.

INSERTING THE LINING

The lining has to be made using the same skirt pattern, 2 cm shorter, with darts and about a 3-cm hem.

Before attaching the waistband or the gros-grain, the lining should be inserted wrong sides together, tacked under the upper edge and basted. Match the seams and the darts of the lining and the skirt; sew the edges of the lining's opening to the zipper tape; insert any loops for hanging the skirt.

WAISTBAND

The edge of the skirt's waist can be finished: *without the waistband*, *with gros-grain*, and *with the waistband*.

For the simple edge, the waistline should be underpinned with the lining and the zipper installed only after underpinning the waist.

Finishing with gros-grain:

- Finish the edge of the waistline using the zigzag stitch.
- Tack the slightly stretched elastic gros-grain onto the right side of the skirt edge and baste it leaving about 2 cm free at either side of the opening.
- Anchor the narrow sides on the wrong side.
- Turn the gros-grain out on the wrong side.

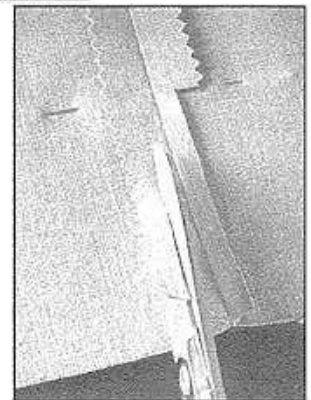
Edge finished with waistband:

- Fasten the interfacing taking into account a seam allowance of 1.5 cm along the edge.
- Pin the right side of the waistband to the right side of the skirt.

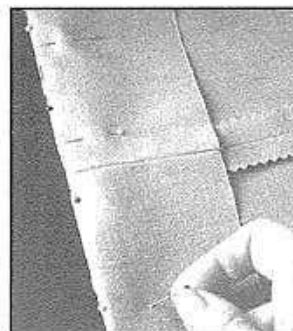
THE DRESSMAKER'S HEM



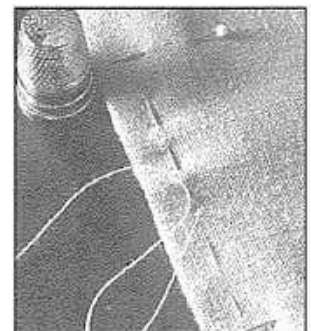
MARK THE HEM



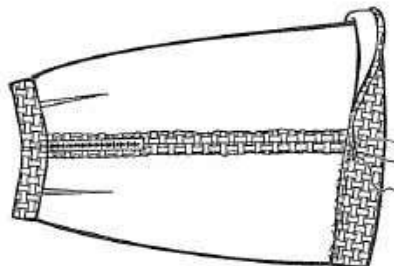
TRIM THE SEAMS



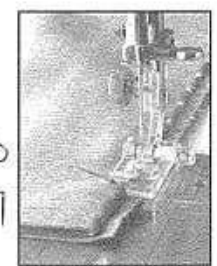
FOLD AND PIN THE HEM



BASTE BY HAND



FOLDED HEM BY BLIND STITCH



BLIND STITCH

WAISTBAND FINISHING



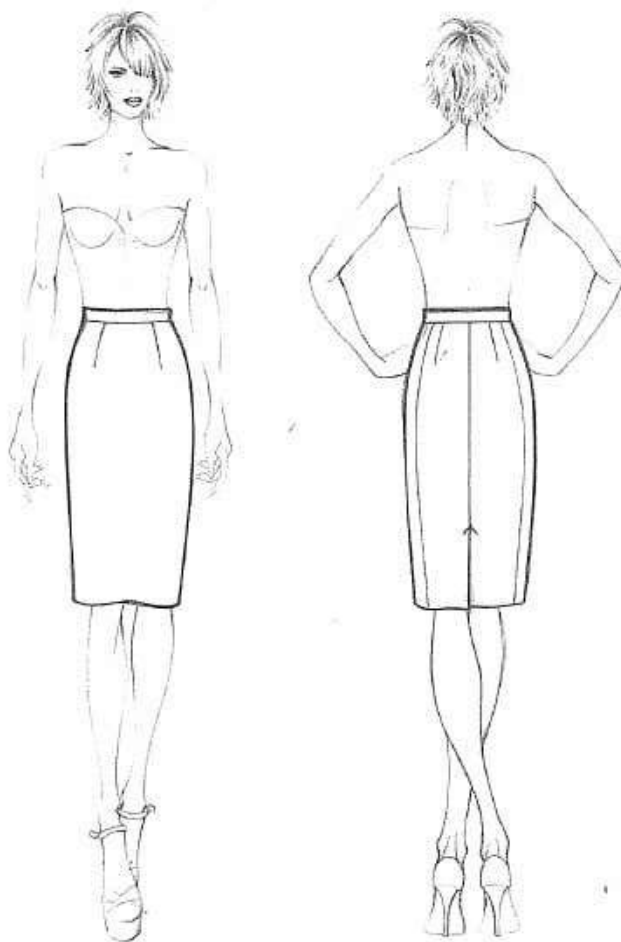
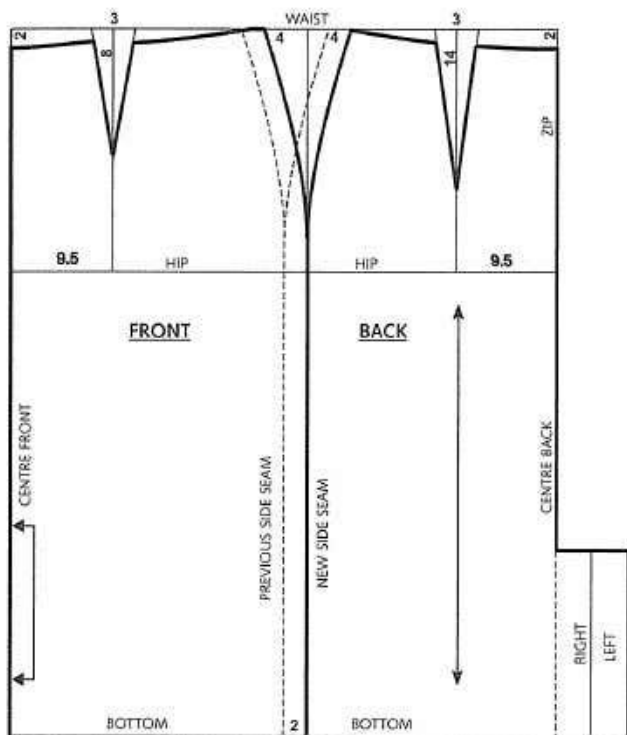
FOLD LINE

WITH WAISTBAND

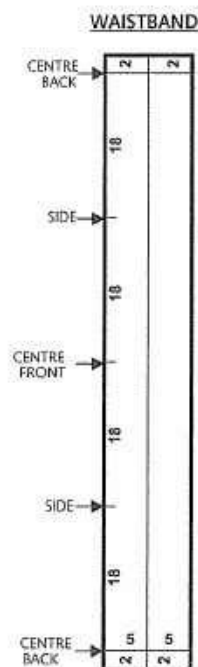
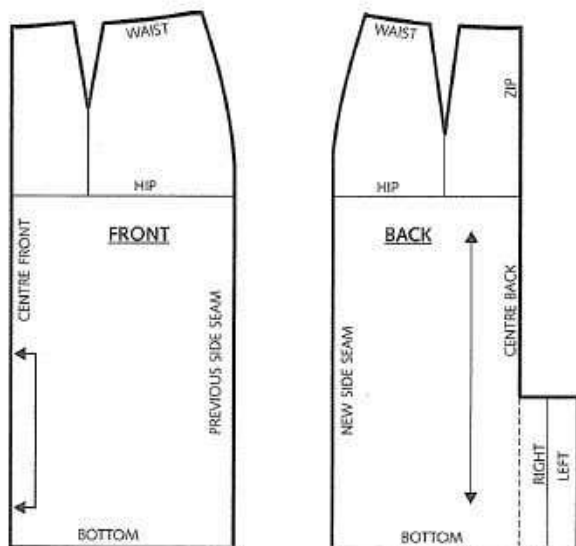
- Turn the waistband up, iron the seam allowance towards the waistband and trim the seam allowances so that they are 5 cm along the waistband and 3 cm along the garment.
- Fold the waistband again along the central fold of the interfacing so that the waistband is wrongside out, and sew the end seams.
- Turn the waistband rightside out again and finish it sewing it all along the waistline.
- Sew a button or a hook for fastening the waistband.

SKIRT WITH SHIFTED SIDE SEAMS

- Draw the basic pattern of the pencil skirt.
- Shift the side seam back about 1.5-2 cm.
- Reconstruct the curves as before.
- Proceed with the construction of all the pattern details.



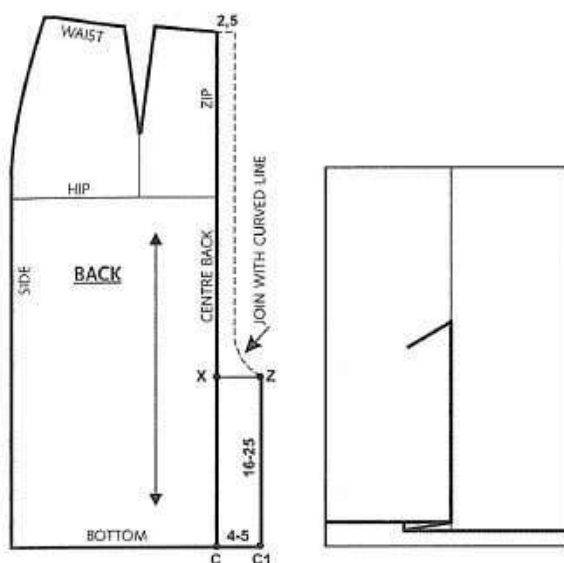
Note: This kind of pattern is rarely used industrially for obvious reasons of symmetry. However, it is very useful for dressmakers, since it allows a nicer fit, especially for subjects with full or prominent hips.



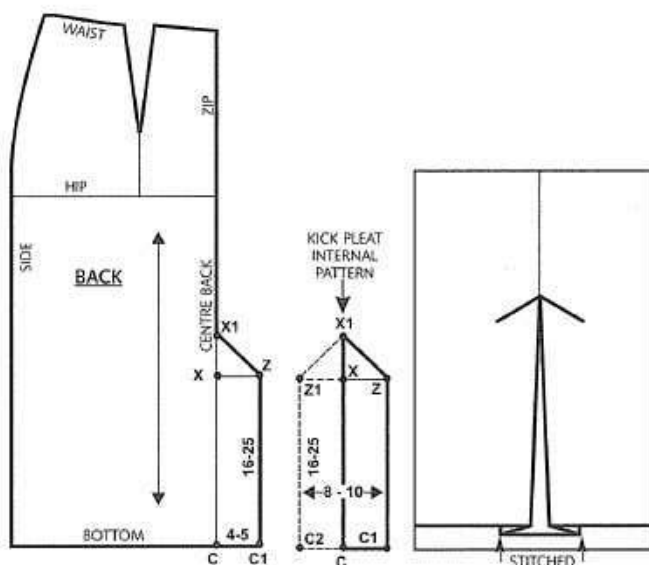
KICK PLEATS

Kick pleats are pleats inserted in the lower part of the skirt, dress, or other close-fitting garments, allowing greater freedom

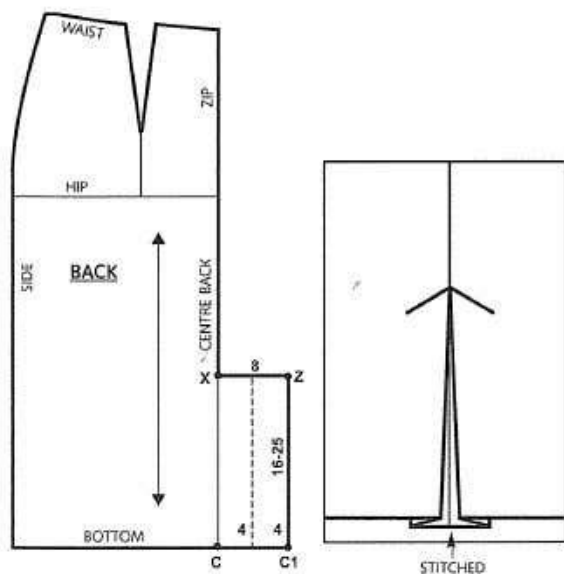
of movement. Their length ranges from 16 to 25 centimetres, and there are various types.



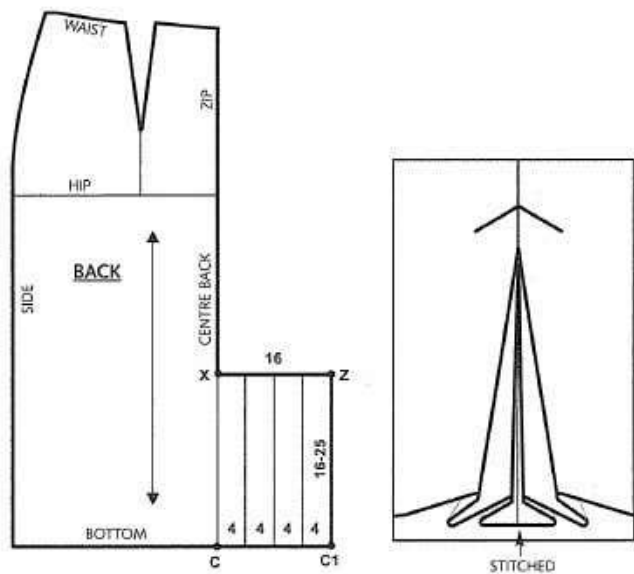
- Make an "X" at the desired height (e.g.: 20 cm).
- Move 4-5 cm from X and draw X-Z-C-C1.
- When making the seams, add 1.5 cm along the Centre Back (or the Centre Front), joining with a curved line.



- Make an "X" at the desired height (e.g.: 20 cm).
- Move 4-5 cm from X and draw X-Z-C-C1.
- Draw the point X1 about 4-5 cm above X.
- Copy the same C-X1-Z-C1 measurements on a double sheet of paper and make the pattern piece C2-C1-Z-X1-Z1.

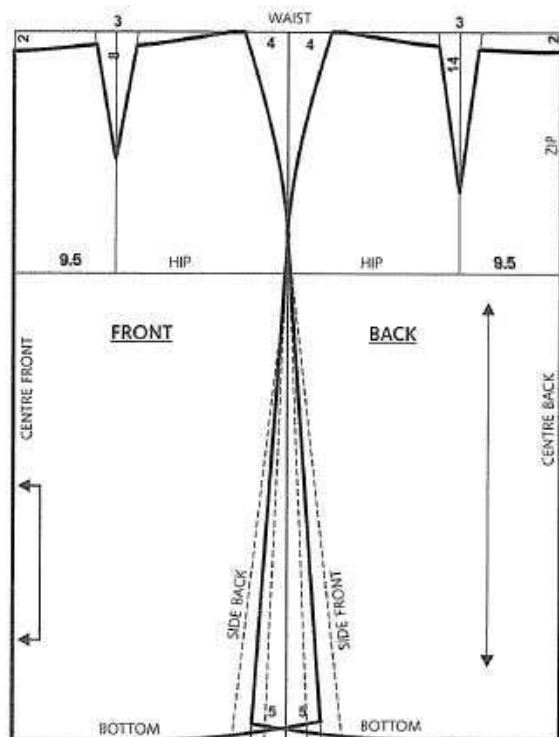


- Make an "X" at the desired height (e.g.: 20 cm).
- Move 8 cm (or as desired) from X and draw X-Z-C-C1.
- Make half of X-Z for the fold.

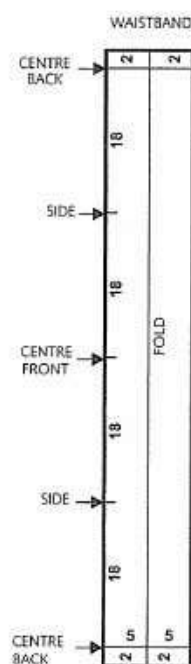
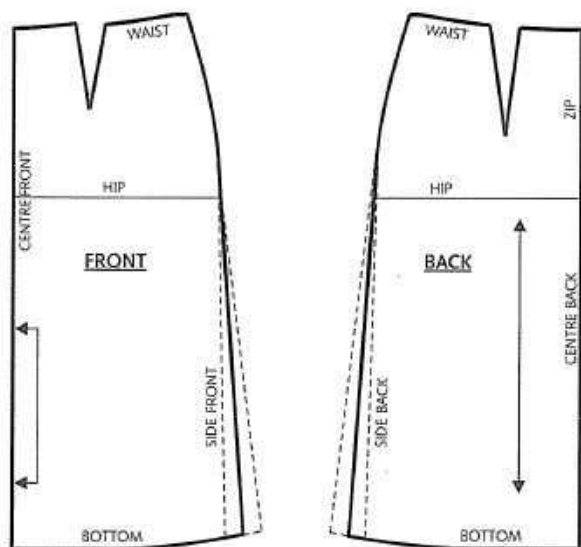


- Make an "X" at the desired height (e.g.: 20 cm).
- Move 16 to 20 cm from X and draw X-Z-C-C1.
- Divide X-Z in 4 parts for the folds.

A-LINE SKIRT

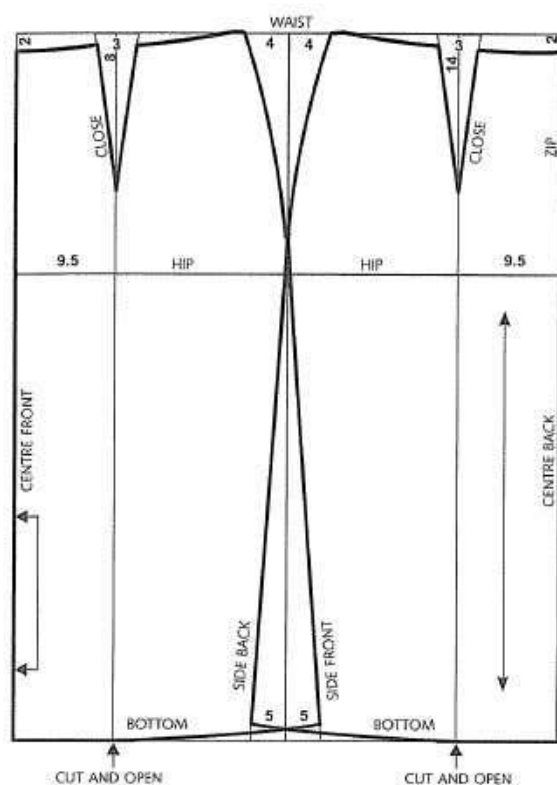


- Draw the inferior pattern of the pencil skirt.
- Move the side seam to the desired width of the hemline (3 to 6 cm).
- Correct the hem run so that it joins the side seam, checking that the side seam is long enough and has the right shape.



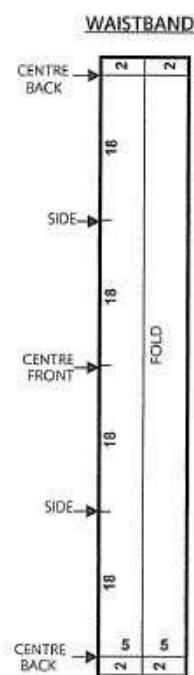
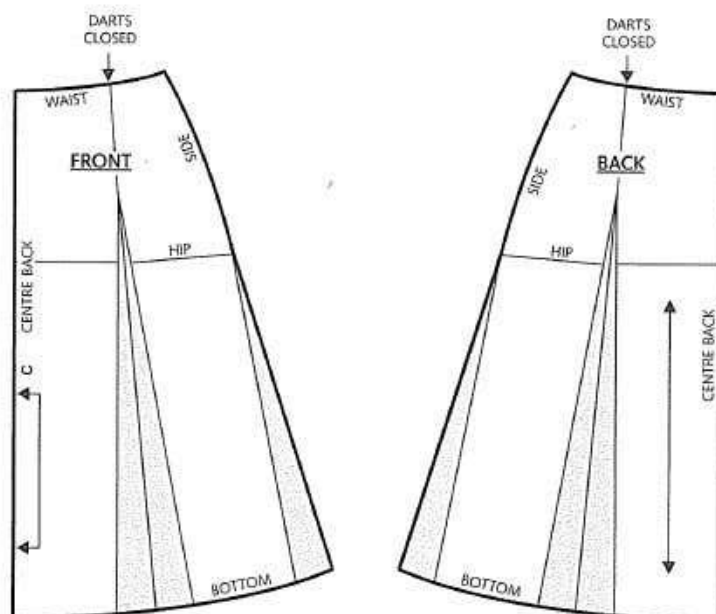
FLARED A-LINE SKIRT

CLOSING THE WAISTLINE DARTS



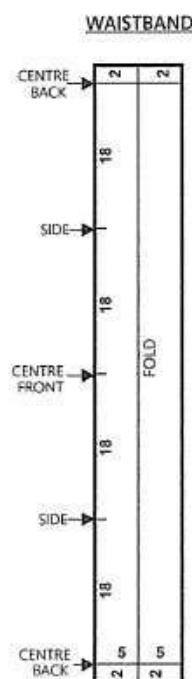
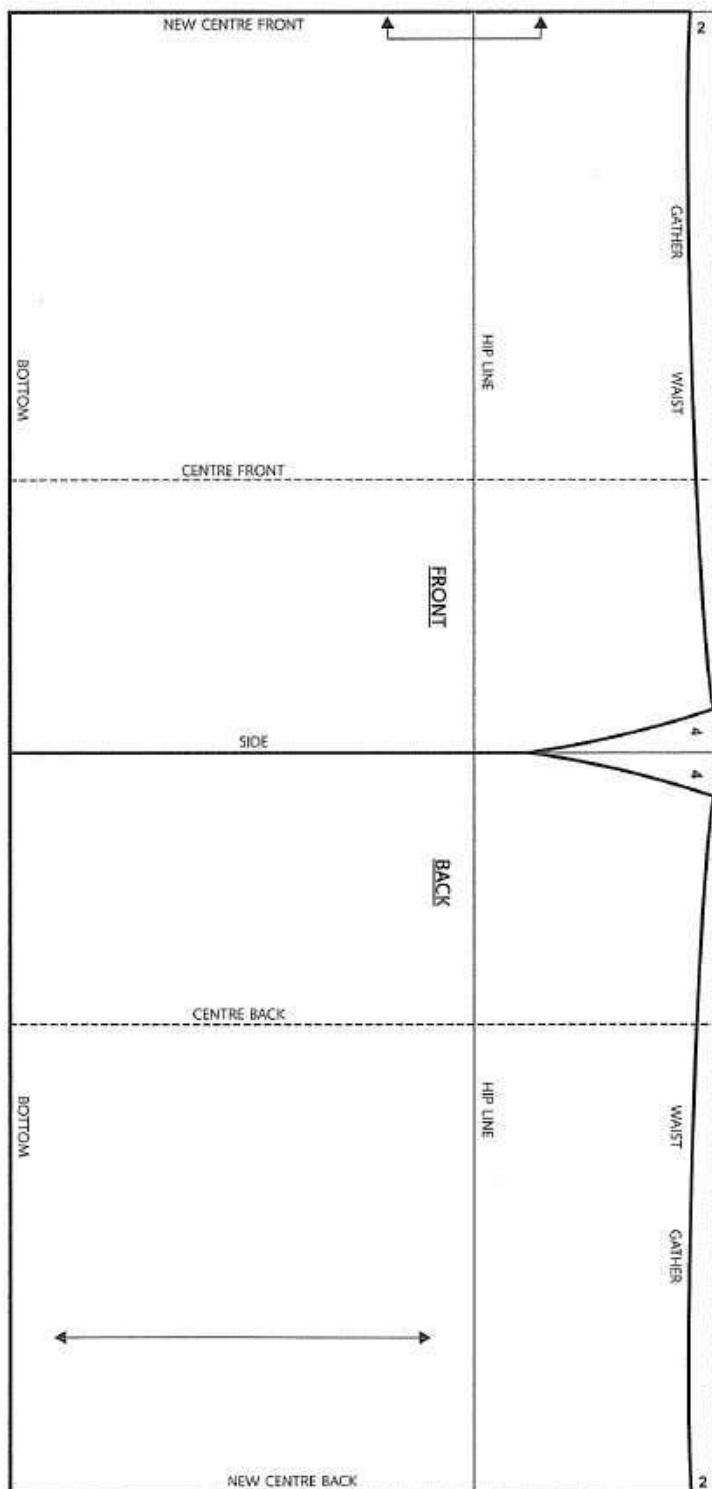
To get this kind of fullness, you need to:

- Make the tips of the front and back darts the same length from the waistline.
- Draw a straight line perpendicular to the waist, running through the centre of the front and back darts.
- Cut along the lines up to the darts.
- Close the darts and open out at the hemline.
- Correct the hem run.



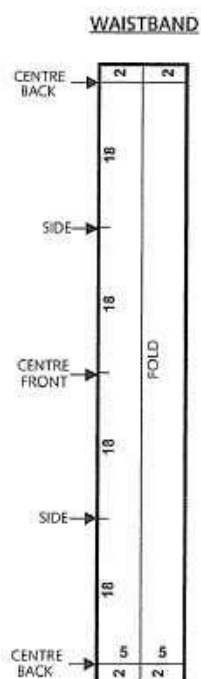
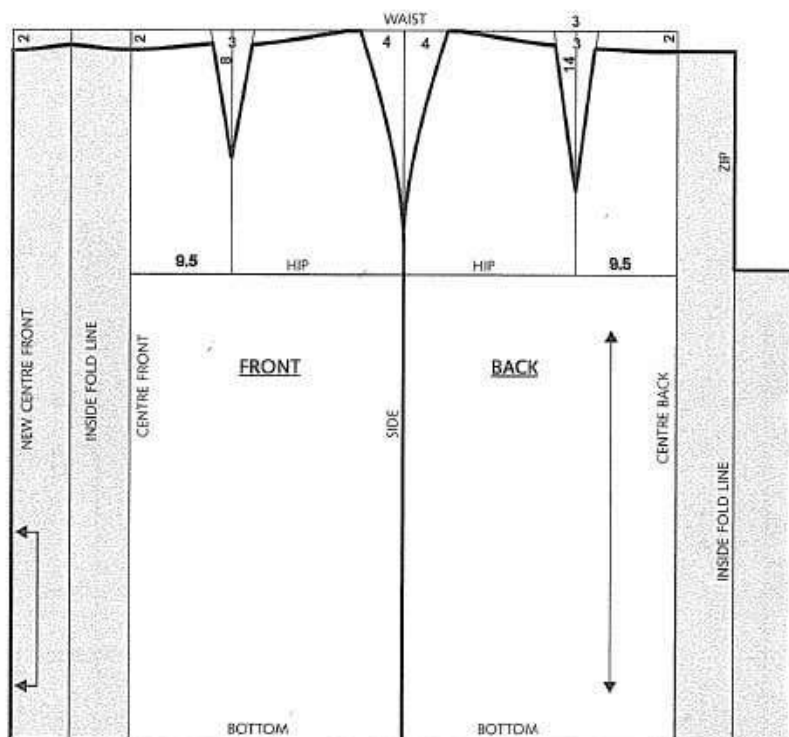
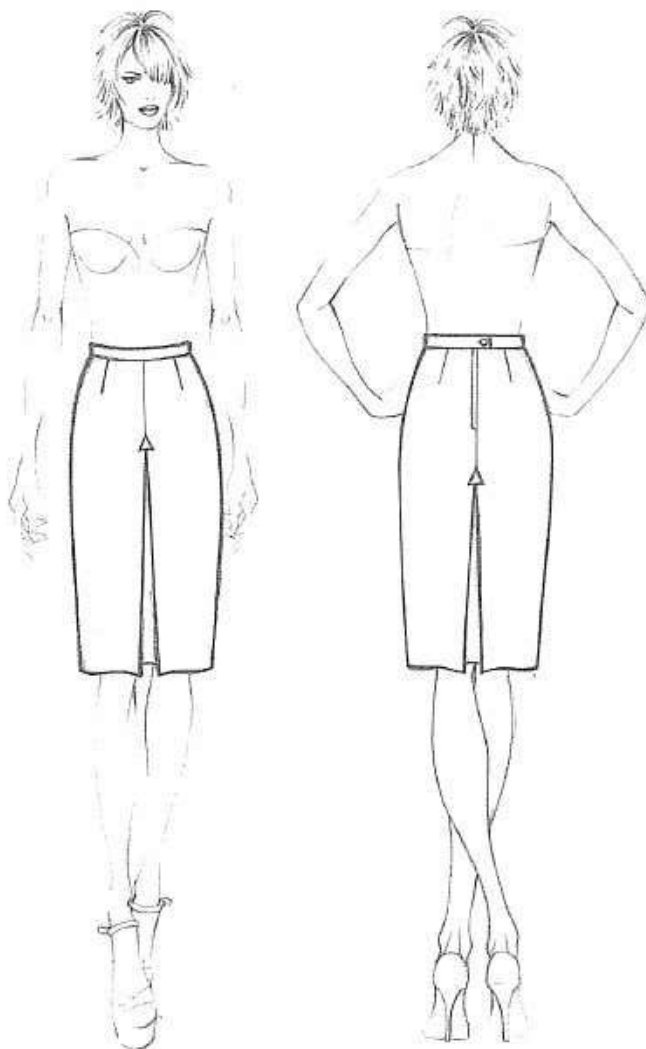
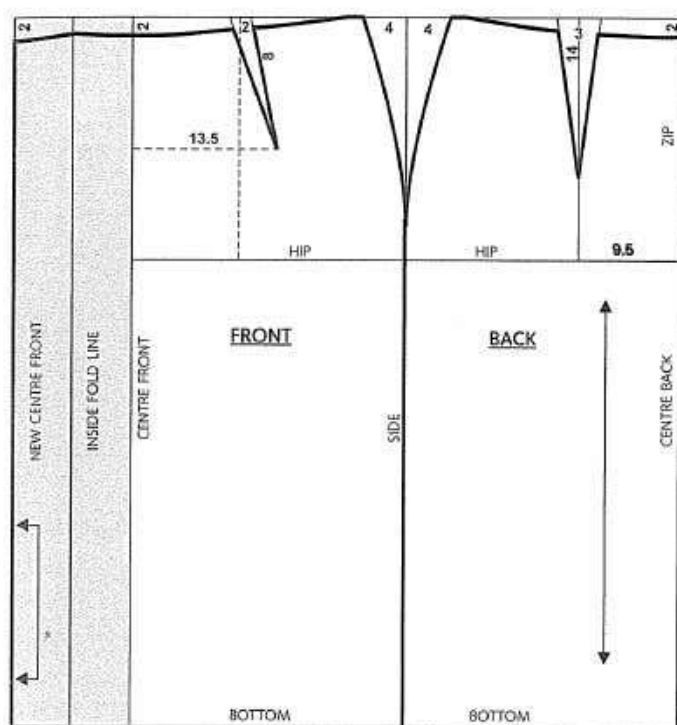
GATHERED SKIRT

- Draw a rectangle the horizontal sides of which are equal to the desired length of the skirt, and the vertical sides equal to the hip circumference plus the desired fullness of the gathers.
- To give a neater line to the skirt, 2-4 cm can be removed on the side seams at the waist, shaping the waistline 1.5-2 cm.



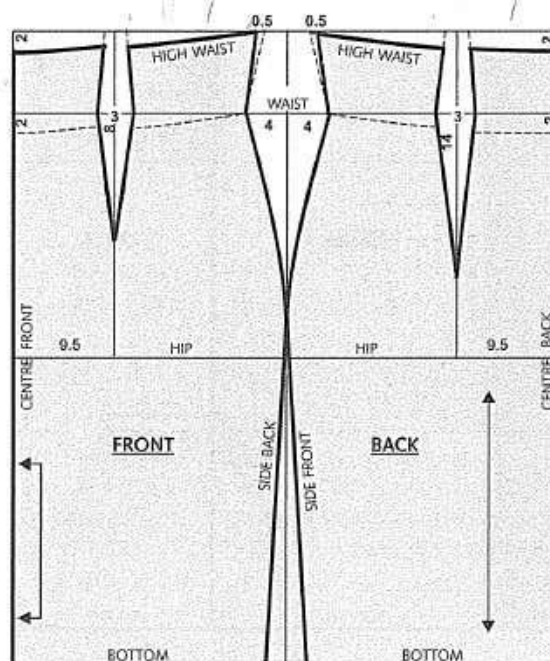
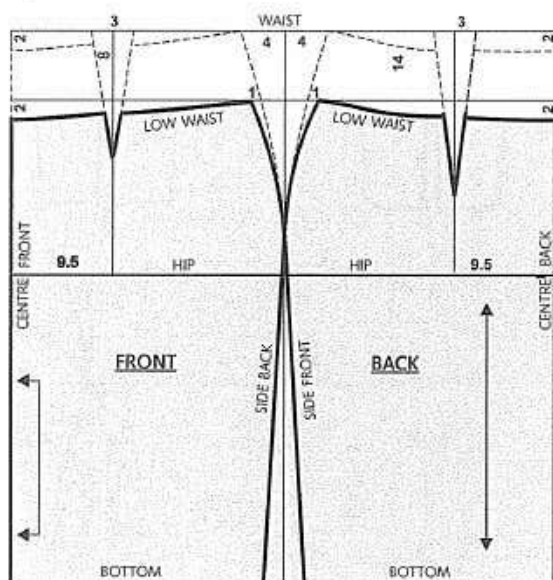
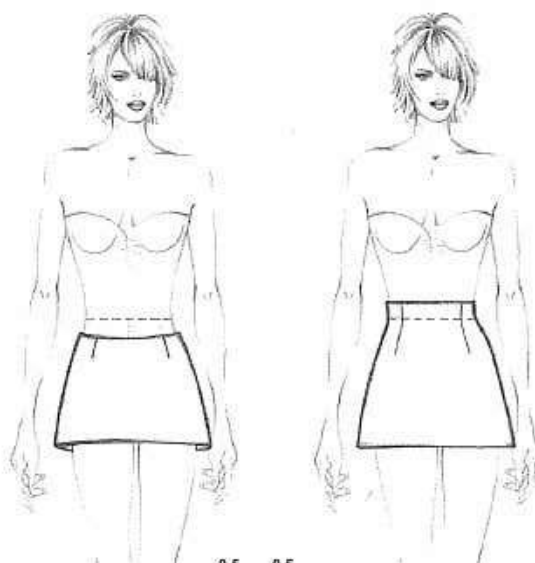
SKIRT WITH CENTRAL INVERTED PLEATS

- Draw the basic pattern of the pencil skirt.
- Make the extension of the centre front for the inverted pleat, measuring $4 + 4$ or $5 + 5$ cm.
- If the same motif is desired in the back, follow the same procedure as the front, leaving a space of half the zipper length between the bottom of the zipper and the top of the pleat.

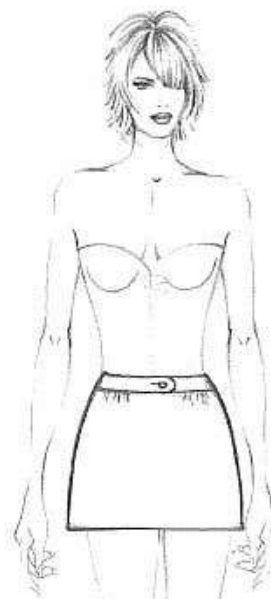
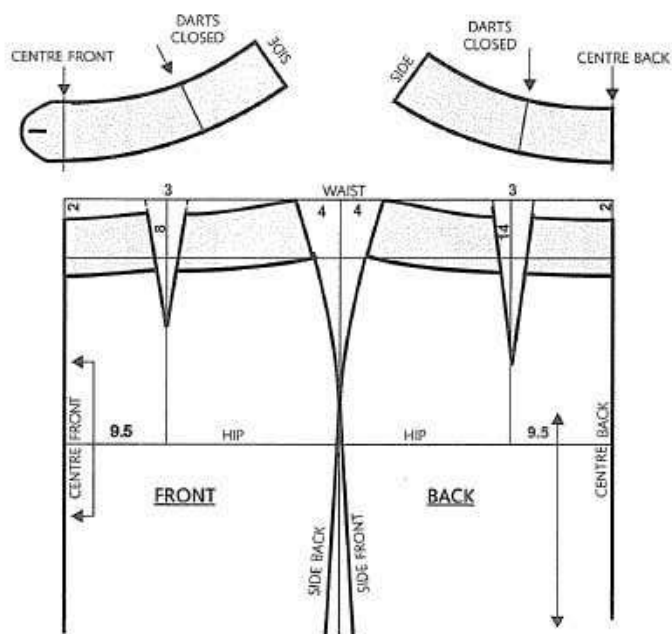


HIGH- AND LOW-WAISTED SKIRT

- Draw the basic pattern of the pencil skirt.
- Raise or lower the waistline to the desired degree and reshape the side seams and the waist darts.
- Low-waisted skirt: Take the waist points in 0.5-1 cm at the sides, for a snugger fit.
- High-waisted skirt: Take the waist points in 0.5 cm at the sides, and draw the waist darts in accordance with the exact measurement of the waist circumference.
- Make the zipper placket, especially for the high-waisted skirt.

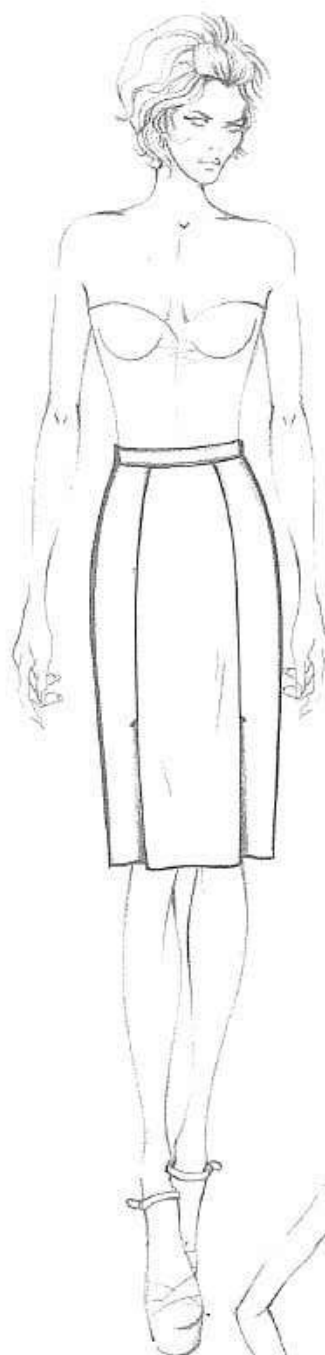


WAISTBAND CUT TO SHAPE

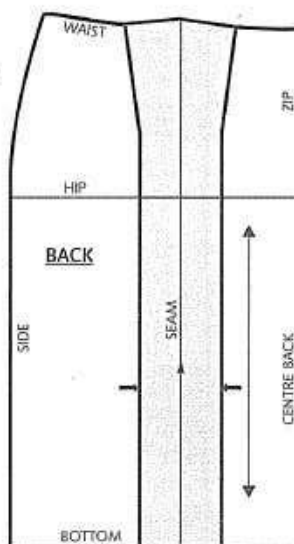


- Draw the waistband, dropping the desired distance from the waist point.
- Take up the two parts with the pattern paper and close the darts.
- Position the waistband pattern pieces on the fabric, placing the back centre on the straight grain of a doubled layer.

IN THE FRONT OR BACK



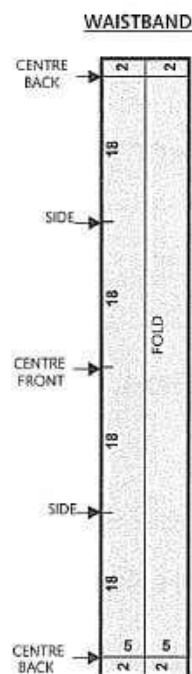
-
- A black and white line drawing of a woman from the back. She is wearing a strapless, knee-length dress with a wide, flat belt at the waist. The dress has a simple, straight silhouette. She is also wearing high-heeled shoes. Her hands are placed on her hips, and her legs are crossed at the ankles. The drawing is minimalist, focusing on the outline and basic proportions of the outfit and figure.



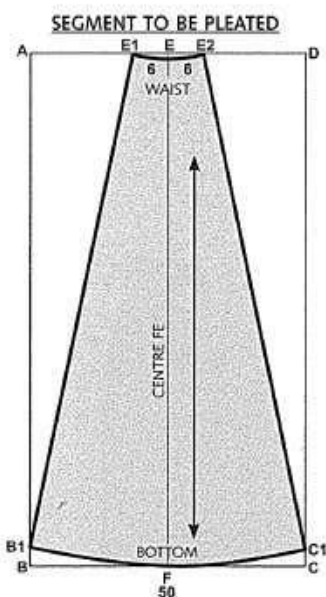
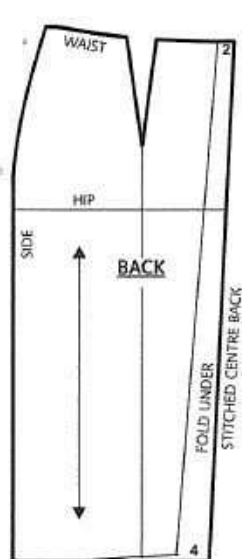
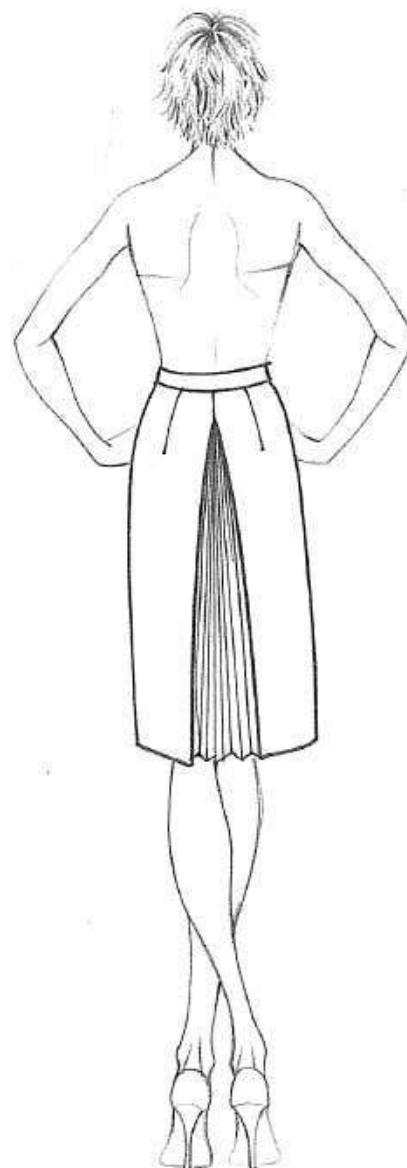
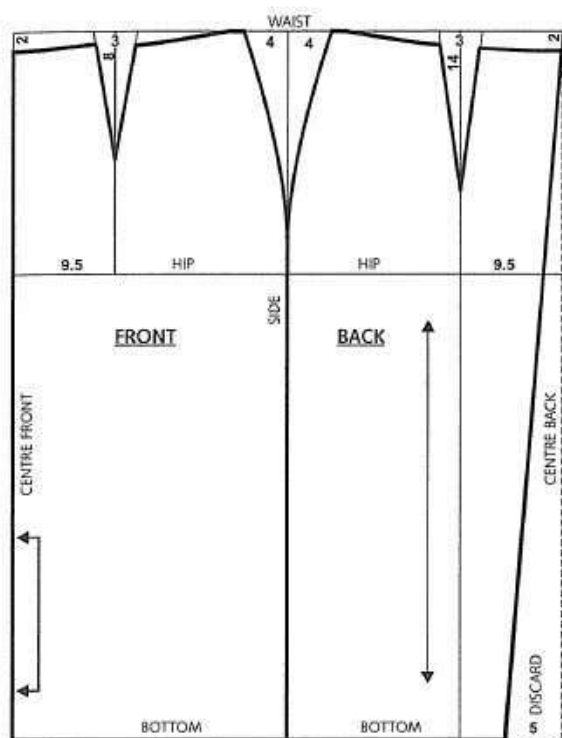
IN THE FRONT OR THE BACK



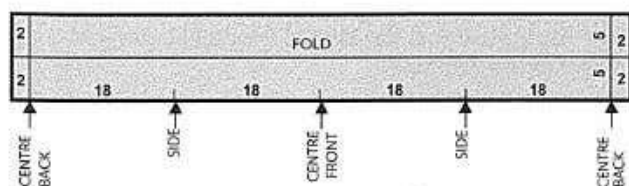
-



SKIRT WITH ACCORDIAN PLEATED PANEL IN THE BACK



WAISTBAND

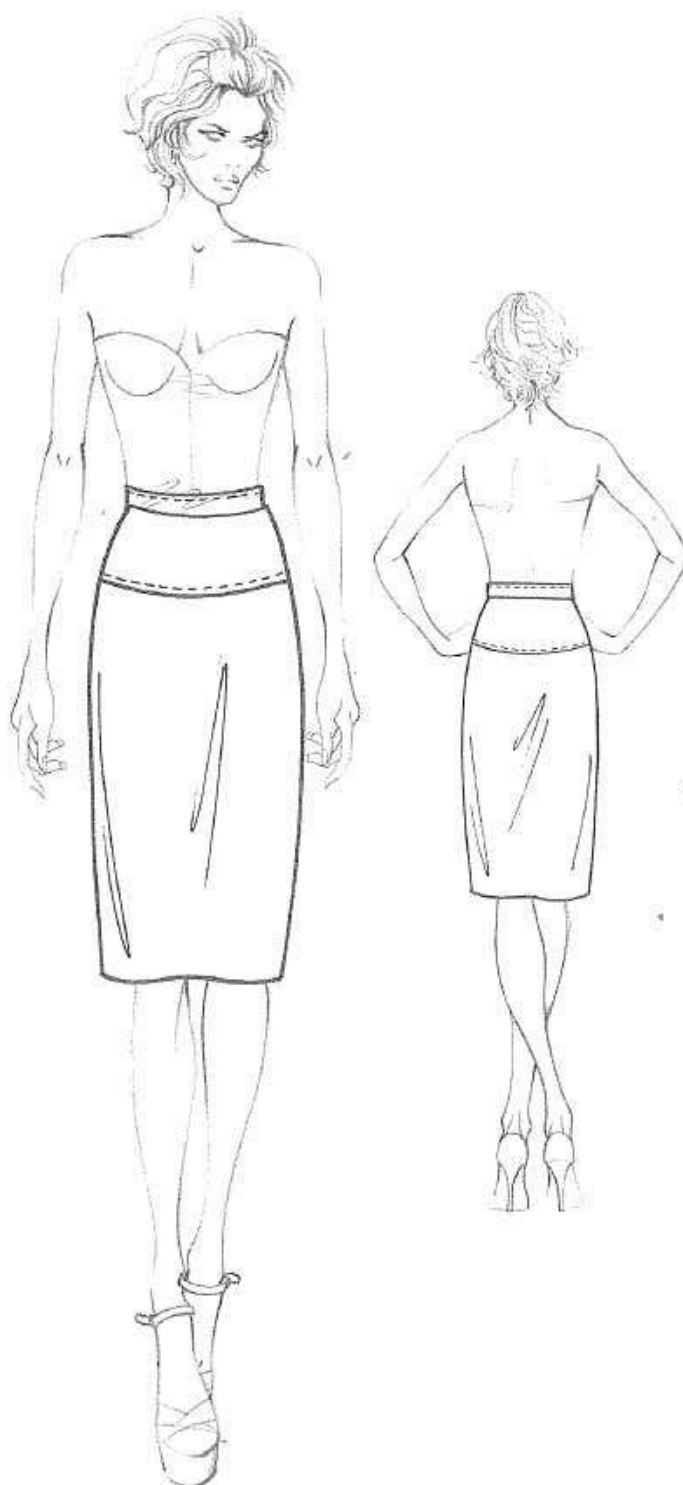
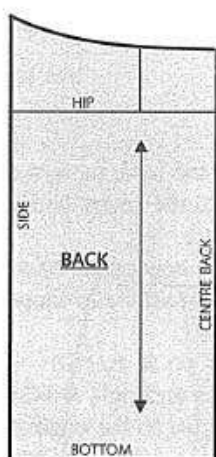
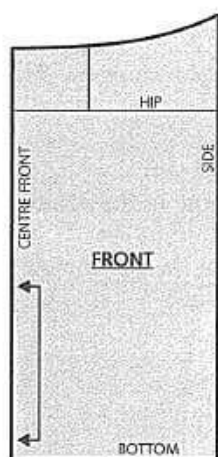
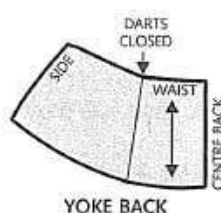
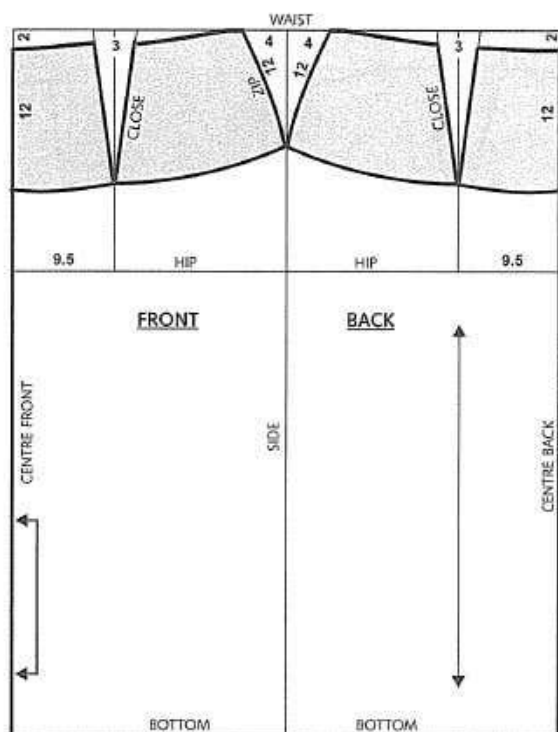


- Draw the basic pattern of the pencil skirt.
- Reduce the centre back hem by 5 cm, or the desired distance.
- Tip the new centre back by 4 cm at the bottom and 2 cm at the waistline to shape the half-pleat.

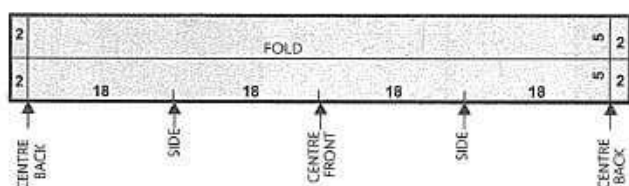
SEGMENT TO BE PLEATED

- Draw a rectangle A-B-C-D, with:
- A-B equal to the length of the skirt (65 cm).
- B-C equal to the desired width of the segment, which can vary depending on the type of fabric and the length of the skirt (in this case 50 cm).
- Draw E-F, where E is midway between A-D.
- E-E1 and E-E2 6 cm.
- Draw E1-B1 and E2-C1 with the same length as E-F.

SKIRT WITH YOKE



WAISTBAND



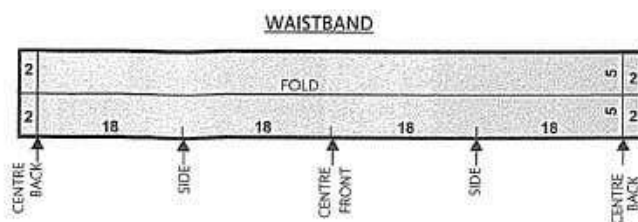
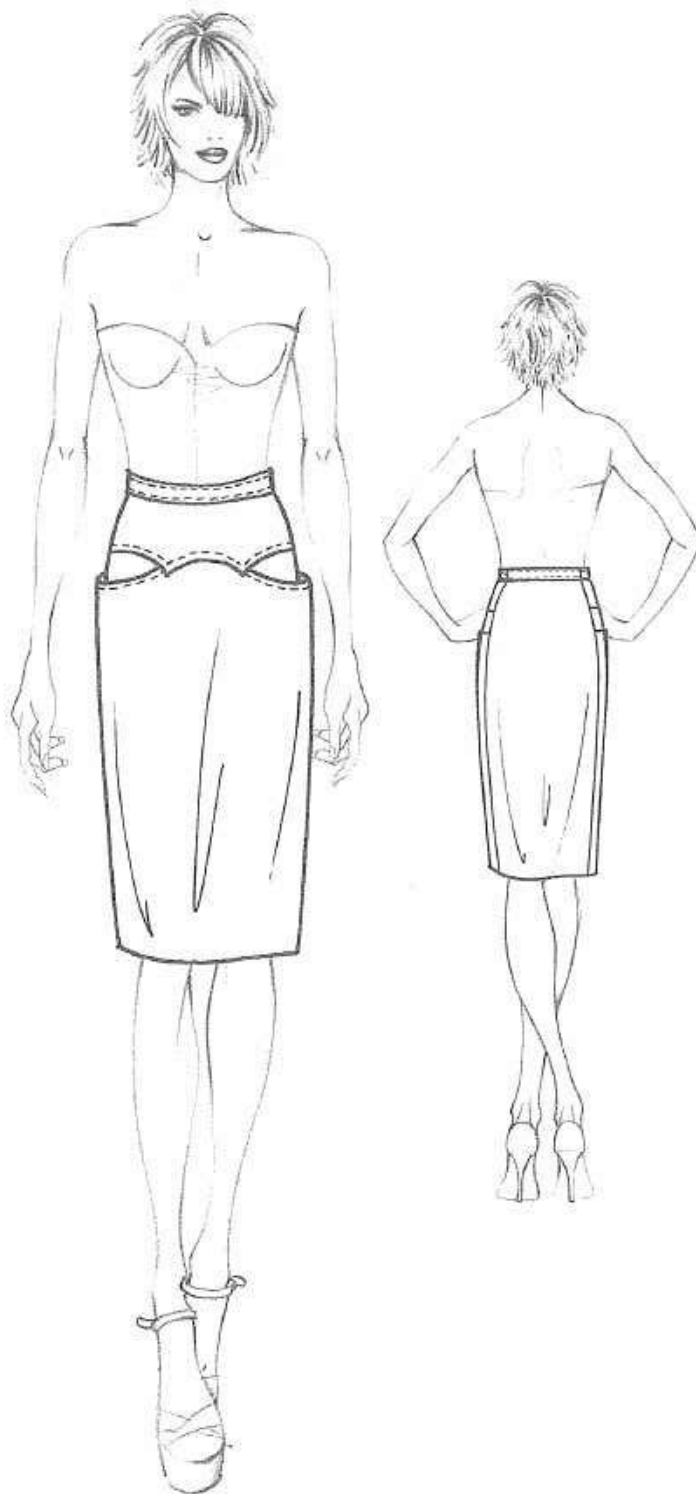
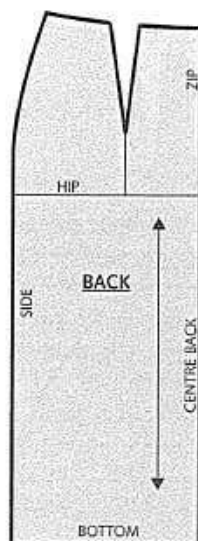
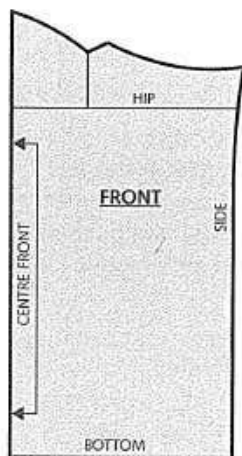
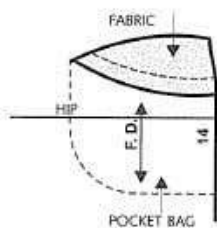
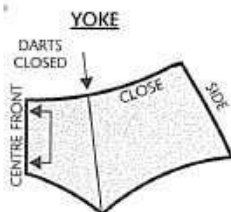
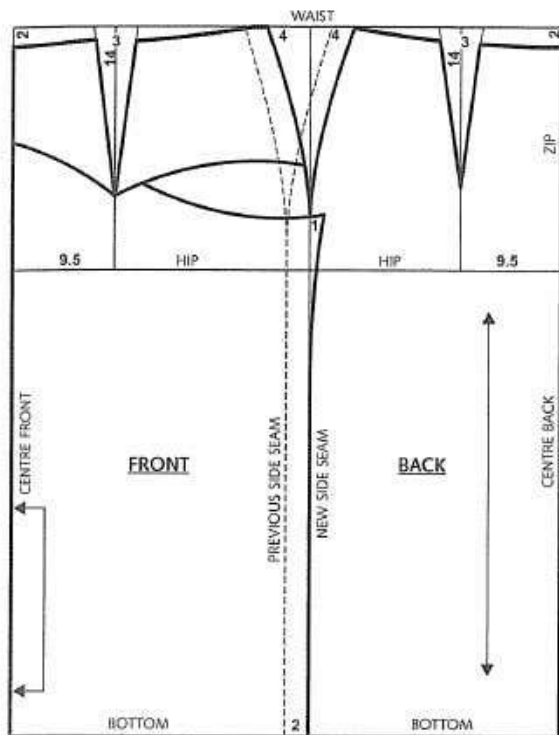
The yoke is a cut made on the upper part of the skirt or the trousers, between the hip line and the waist.

Yokes can have different shapes and different dimensions.

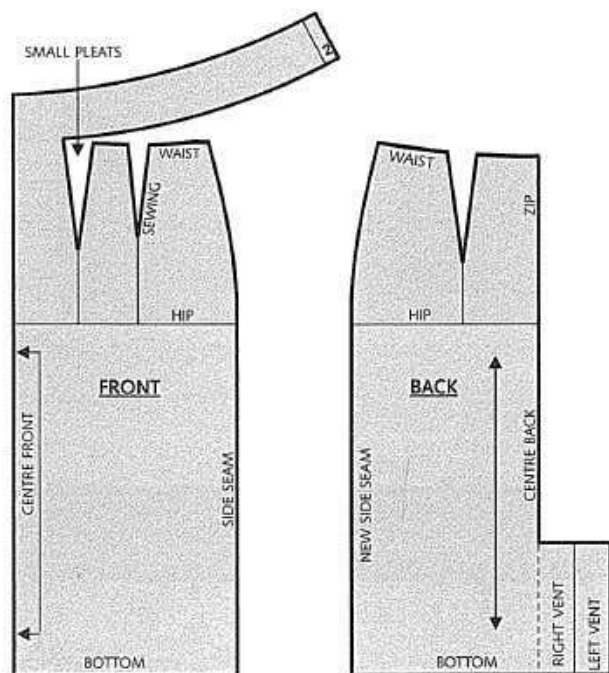
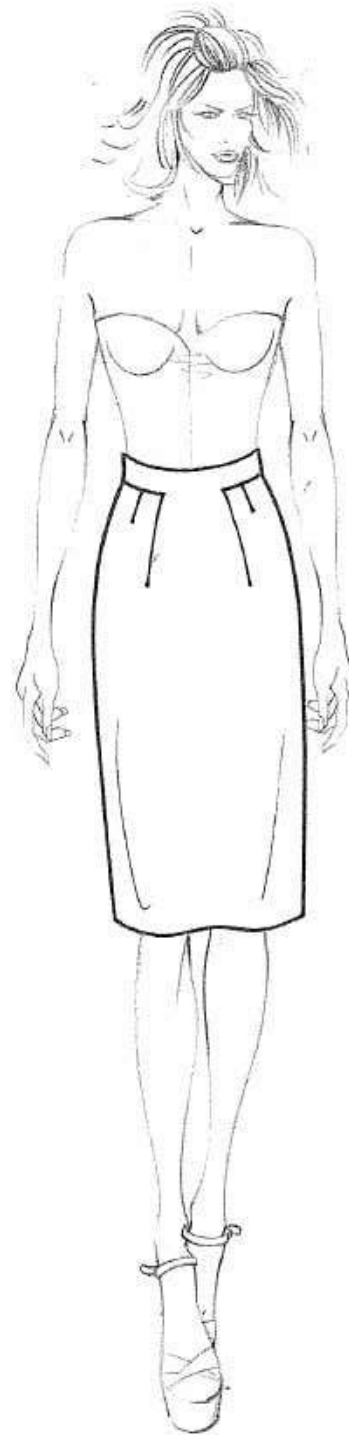
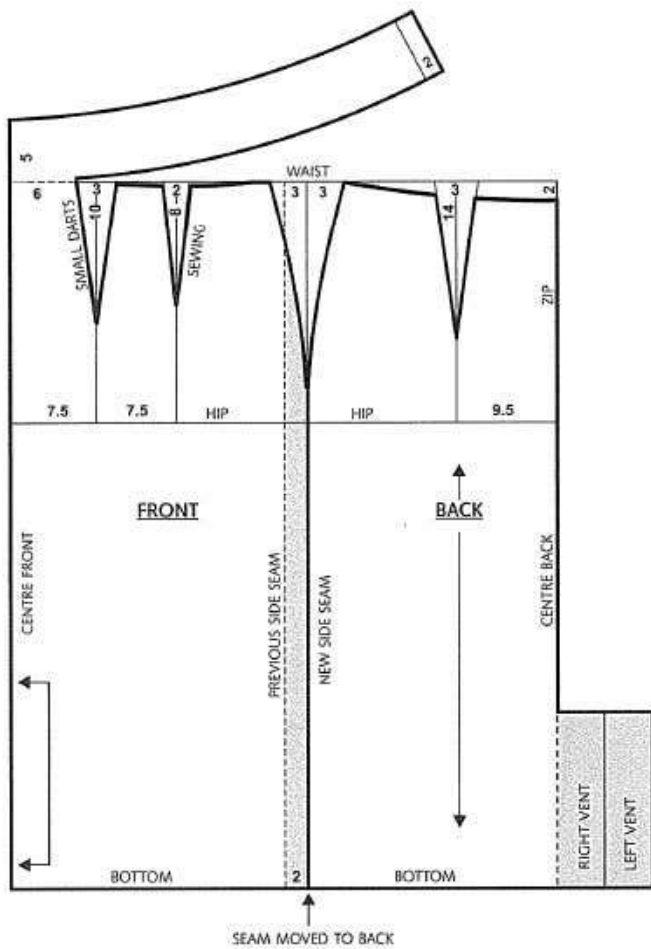
The yoke in this pattern is simple, and is 12 cm high.

- Draw the basic pattern of the pencil skirt.
- Draw the yoke line at the desired height (12 cm) and parallel to the waistline.
- Give the darts the same height as the yoke, bearing in mind that they should never extend beyond it.
- Cut the yoke and close the darts.

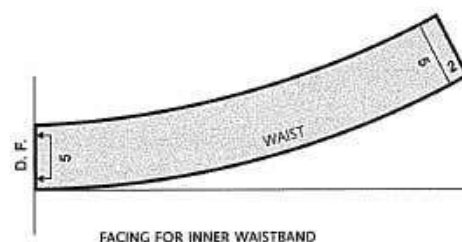
SKIRT WITH SHAPED YOKE AND SEAM MOVED TO THE BACK



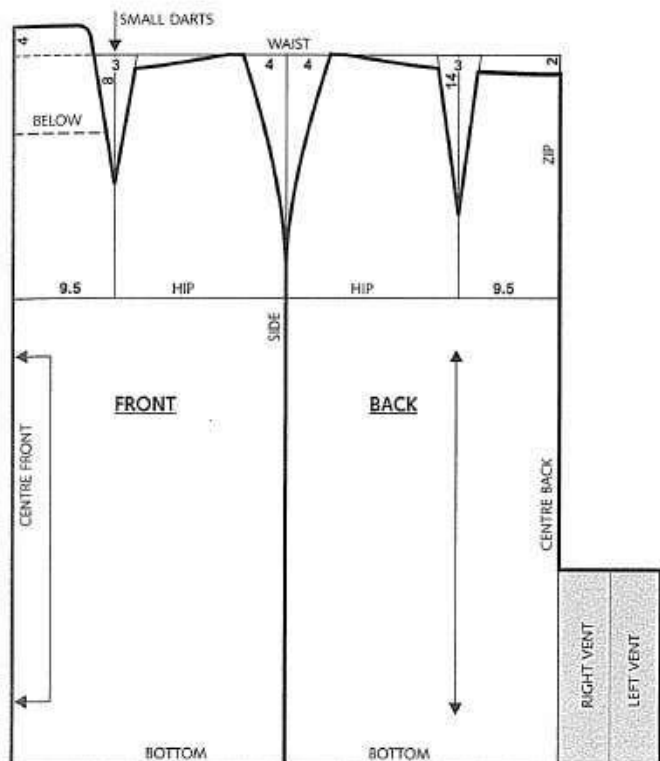
SKIRT WITH INTEGRAL WAISTBAND AT THE FRONT



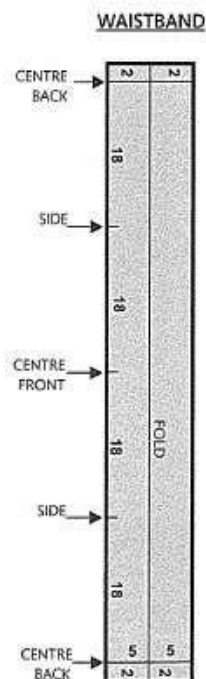
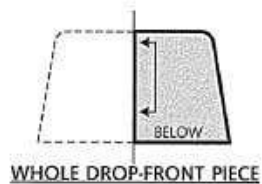
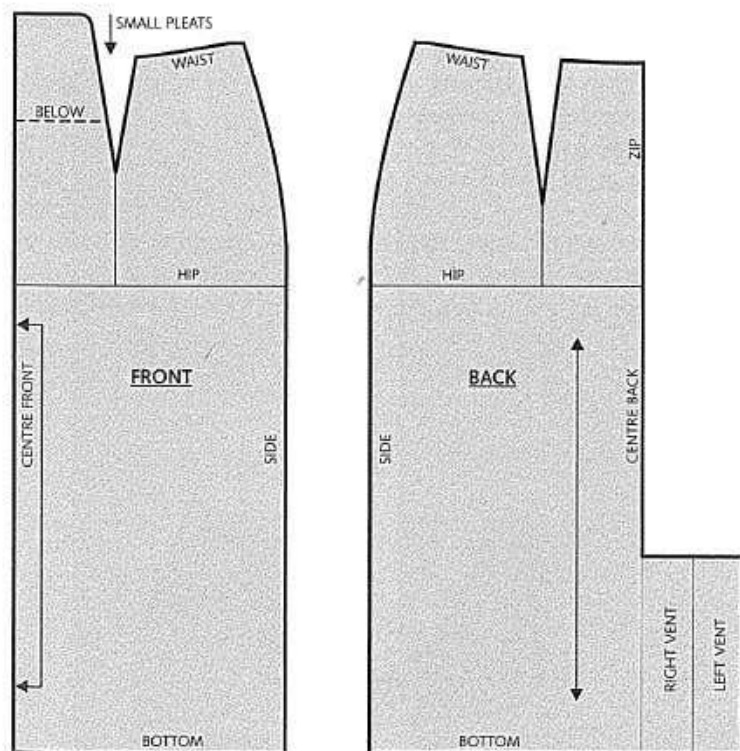
- Draw the basic pattern of the pencil skirt.
- Move side seam 2 cm to the back part, if desired.
- Draw on front the second dart as shown on the pattern.
- Draw the waistband from centre front, width desired (5 cm) and with length equal to the waist circumference + 2 cm for overlap.
- Draw the back vent.



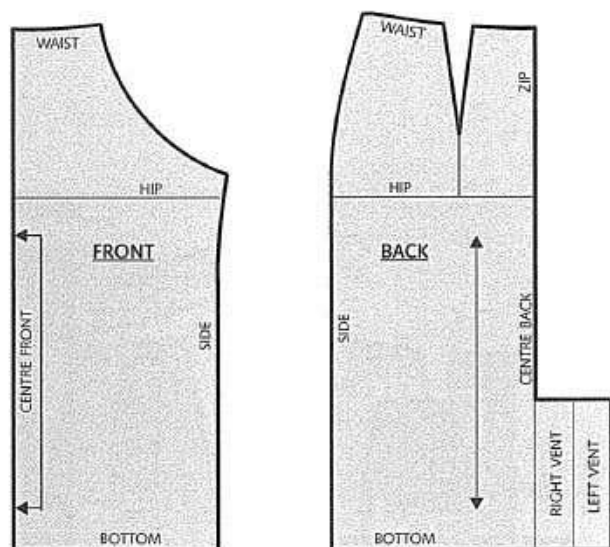
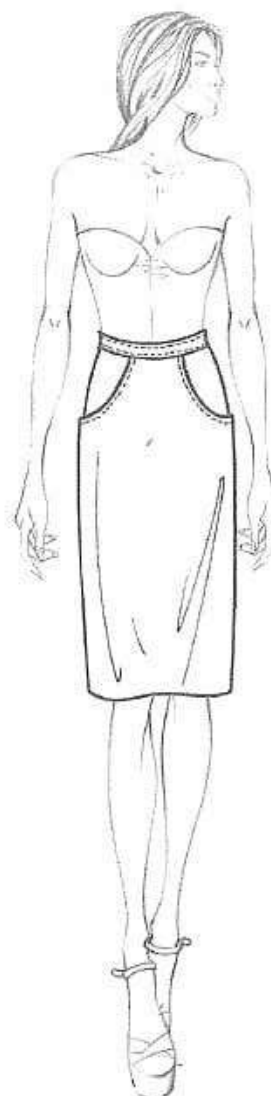
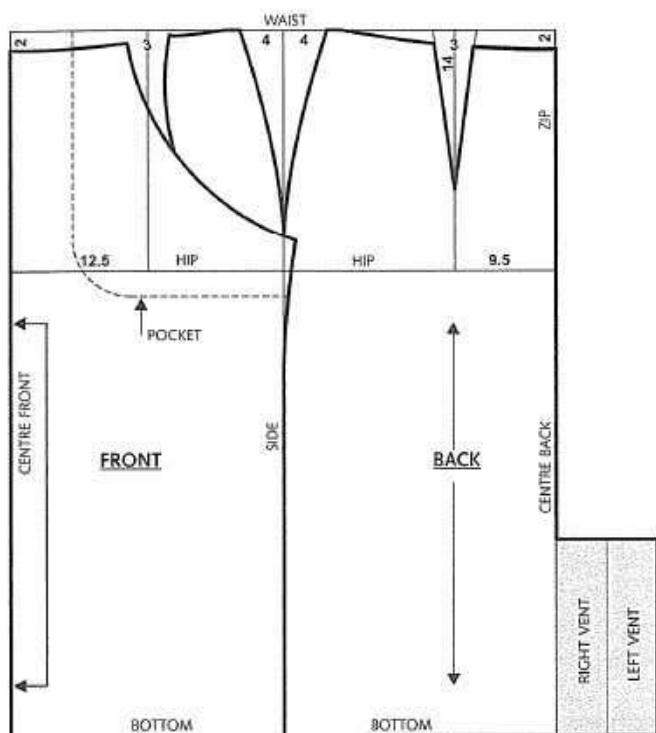
DROP SKIRT WITH DROP-FRONT PANEL



After drawing the basic pencil skirt block, extend the centre front line and the left hand side of the front waist darts to the desired length (4 cm), and complete the outline. In this case, the front dart is hidden by the panel.



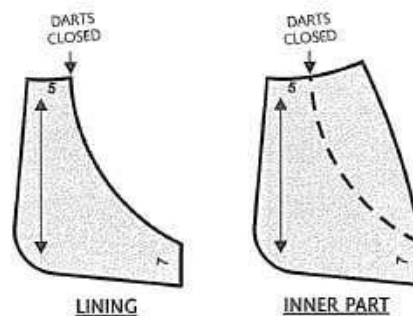
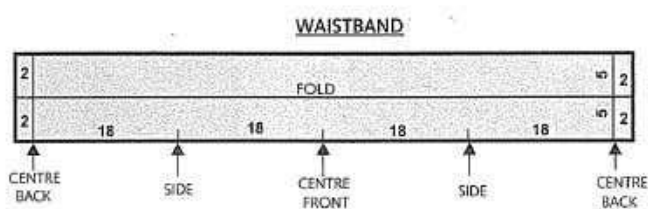
SKIRT WITH ASYMMETRICAL INSIDE POCKETS



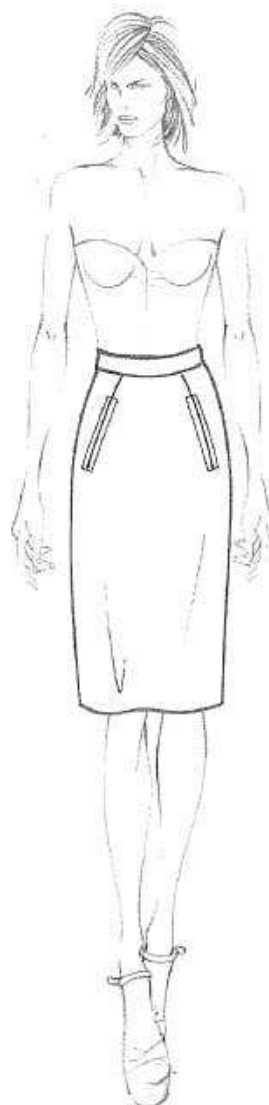
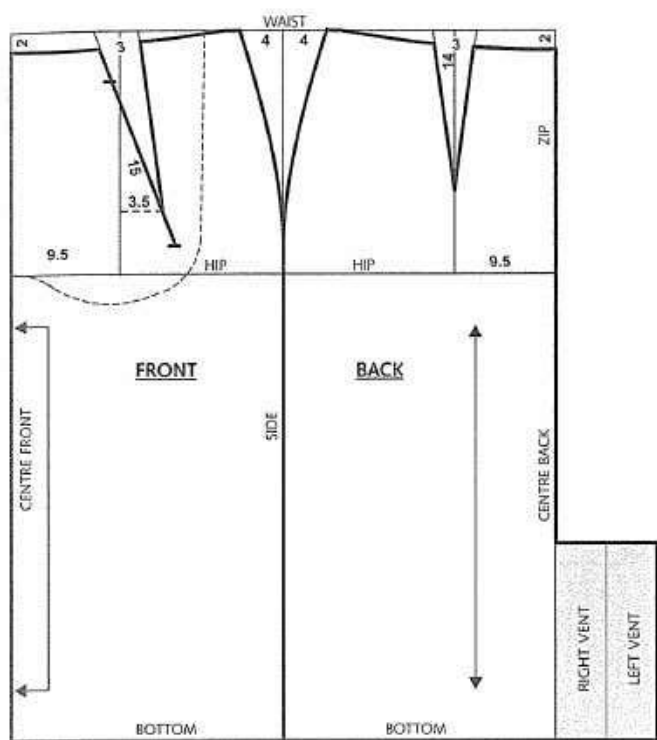
The edge of this kind of pocket is far from the side seam and creates a yoke-like effect.

To draw these pockets, you need to shift the front darts, giving them the same shape as the pockets.

All the pattern parts, that is: 1) the inner part, or the yoke; 2) the outer part of the pocket where the back of the hand touches when it is tucked in the pocket; 3) the pattern piece for the skirt front; 4) the lining, all these parts should be prepared together.

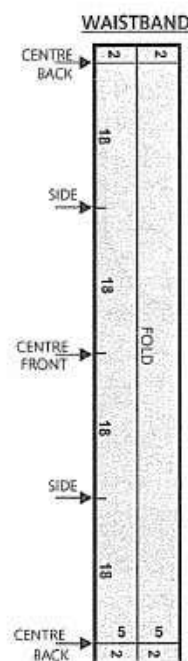
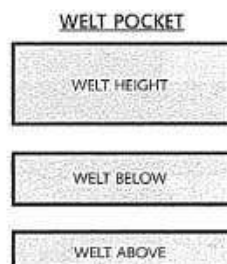
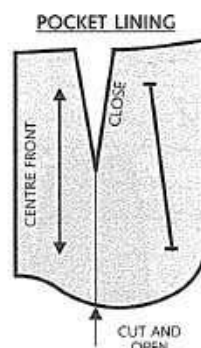
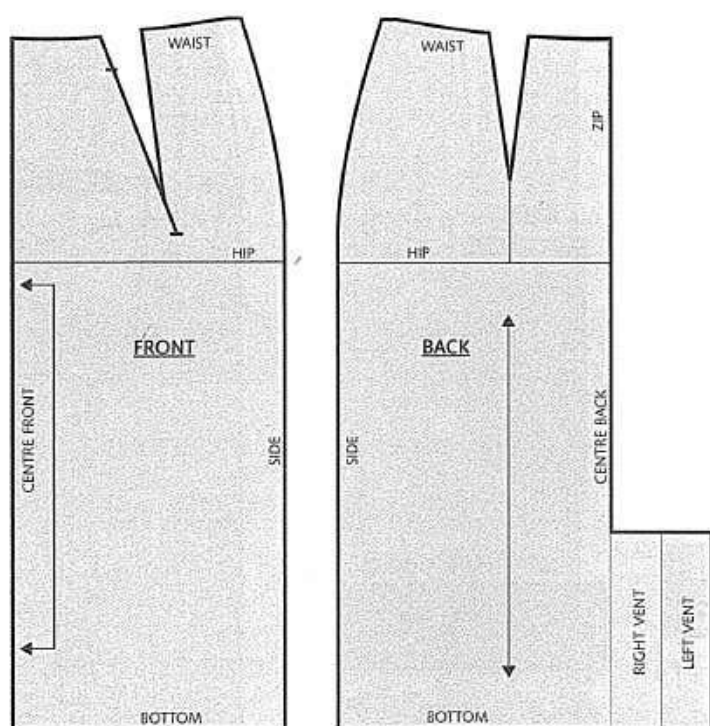


SKIRT WITH WELT POCKETS

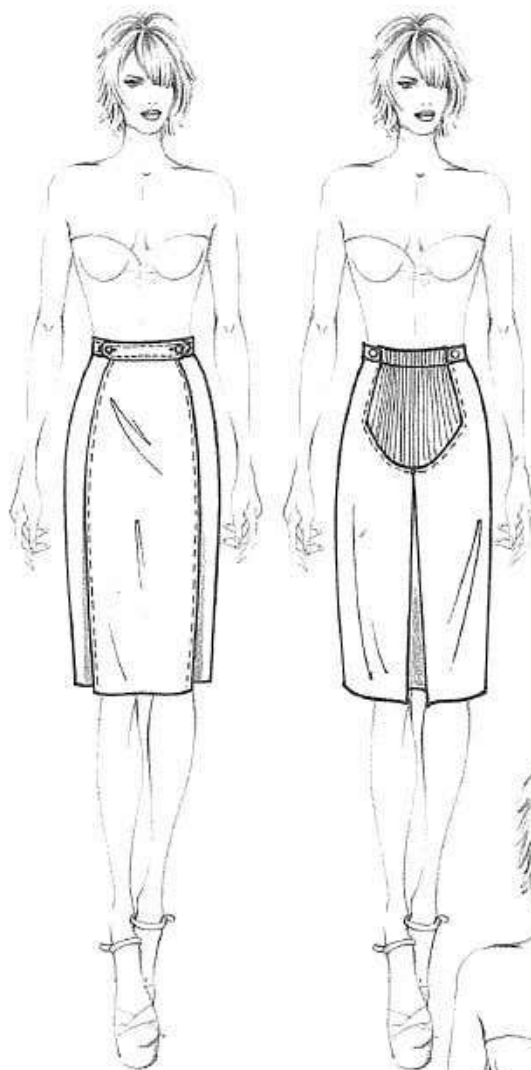
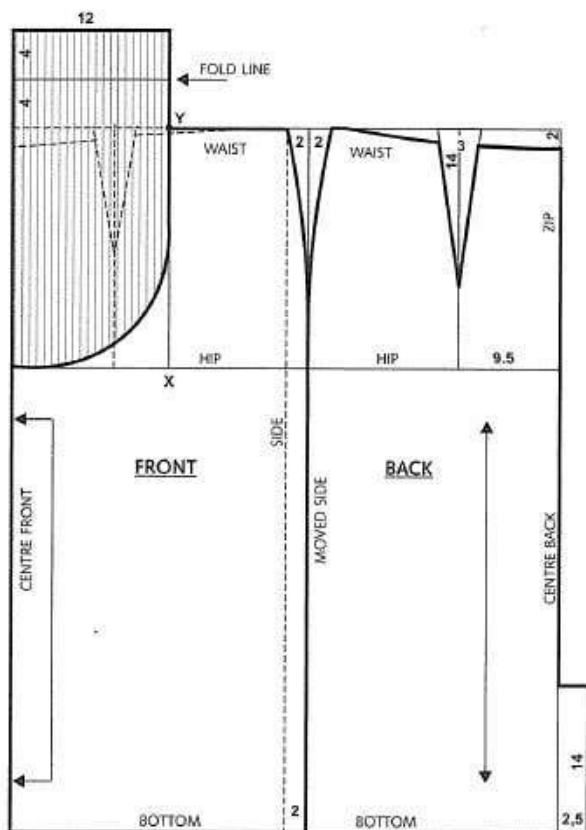


The welt pocket has an opening like a large buttonhole, and it can be made with or without the decorative strip. Here, too, the front darts have to be moved, to follow the slant of the pocket.

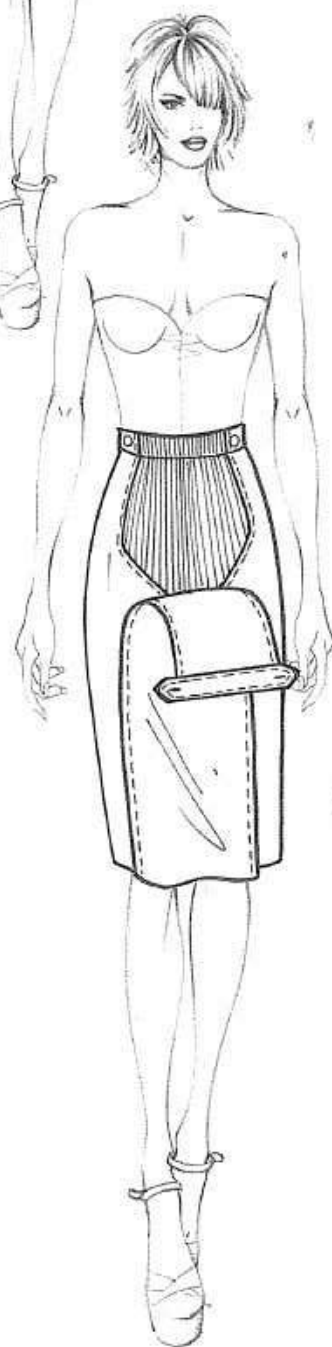
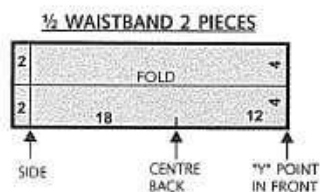
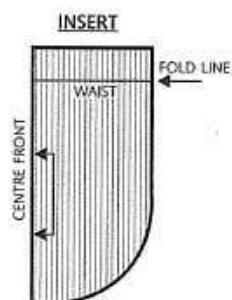
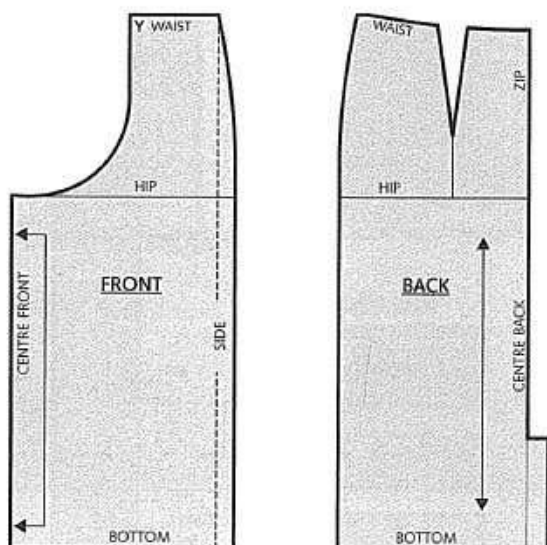
The pocket is attached beneath the opening and is made up of two parts: one internal, closer to the body, and another external, above, between the garment and the back of the hand.



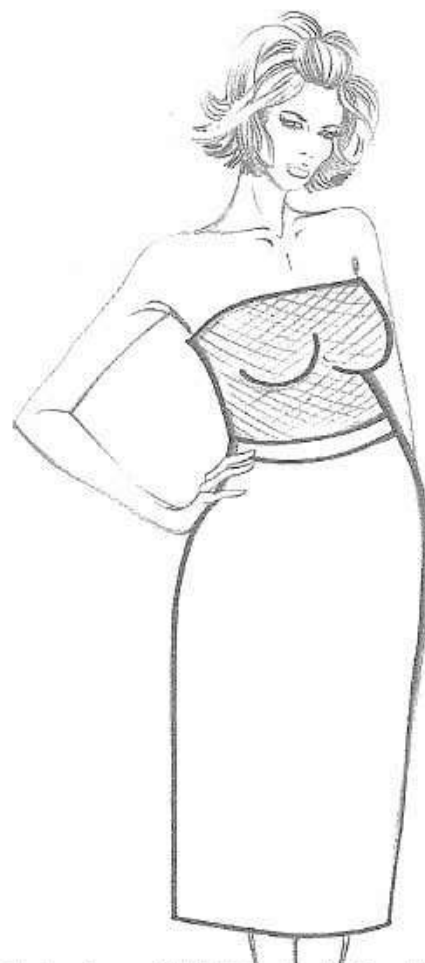
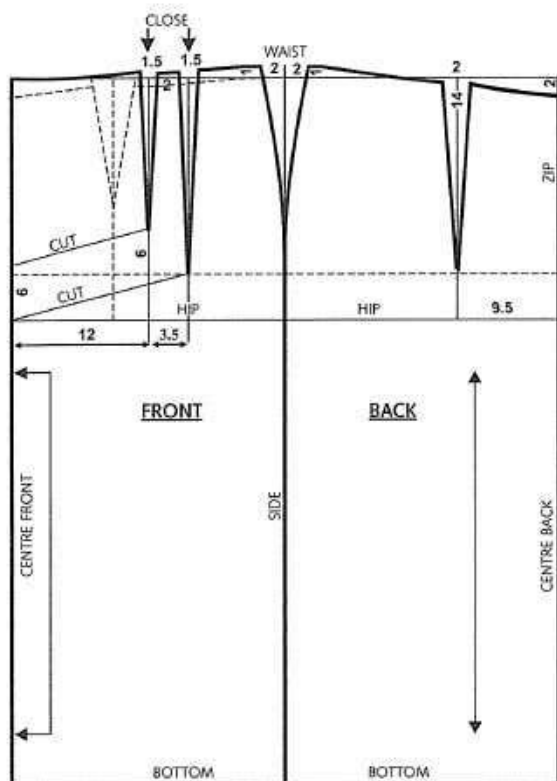
MATERNITY SKIRT



- Draw the basic pencil skirt block, with the side seam moved toward the back.
- Divide the front in half (12 cm) and draw a vertical line from the waist to the hip: points X-Y.
- Extend the front centre as much as necessary, depending on the size of the belly + the same measurement, for the double fold (e.g.: 4 + 4 cm).
- Draw the shape of the elastic panel up to the hip line.



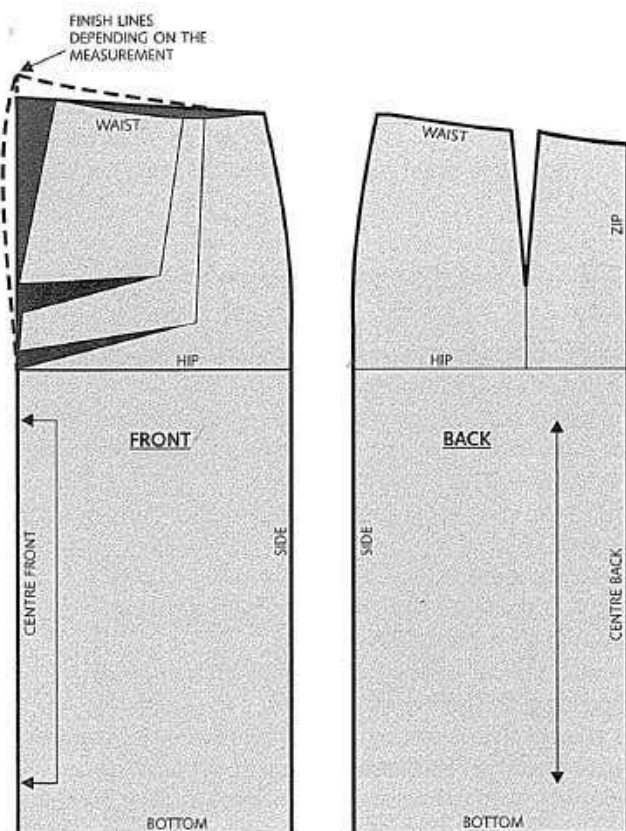
FULLER MATERNITY SKIRT



- Draw the basic pencil skirt block, with the side seam moved back, or not.
- Move the front dart toward the side and divide it in two, with the tips in different positions, for cutting
- Starting from the tips of the darts, draw two lines slanting toward the centre front, one of which connects with the hip line, and the other is parallel, higher up.
- High-waisted: Raise the waist points by 1 cm at the sides.
- High-waisted: Raise the waist points by 2-2.5 cm at the centre front.
- Cut along the lines drawn beforehand from the tips of the darts to the centre front, and, closing the darts, open them on the centre front.
- Finish the centre front lines as needed.

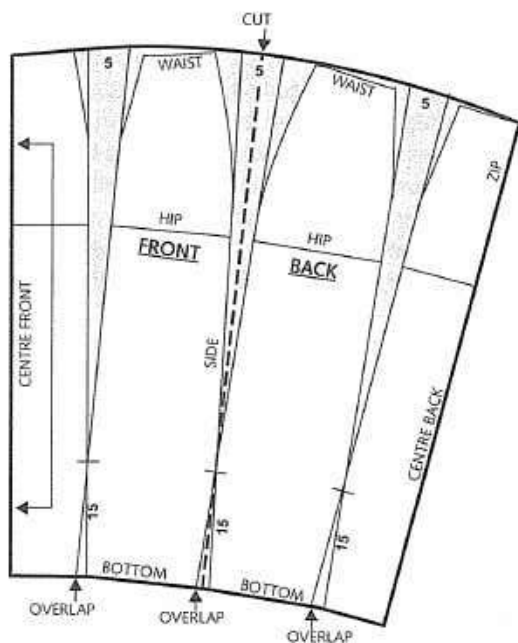
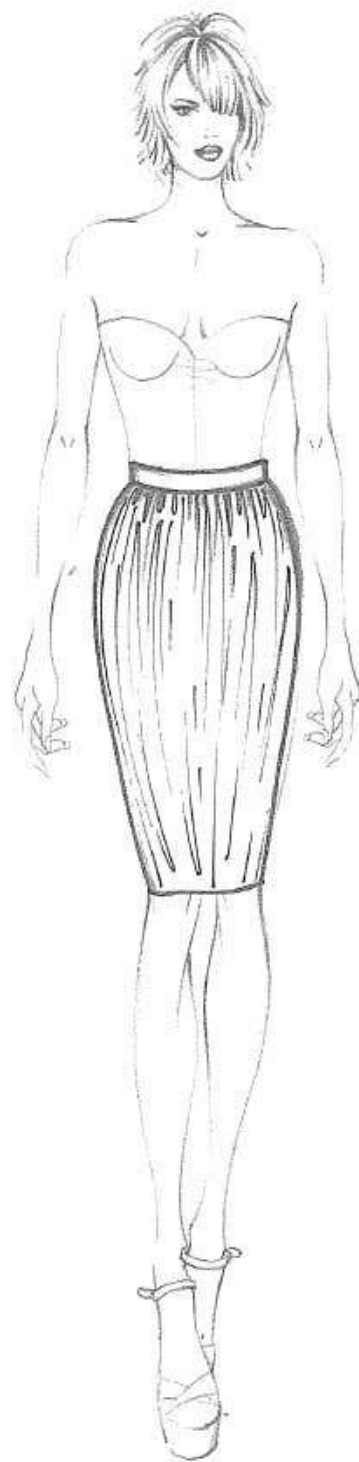
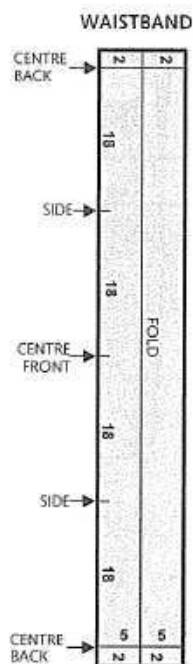
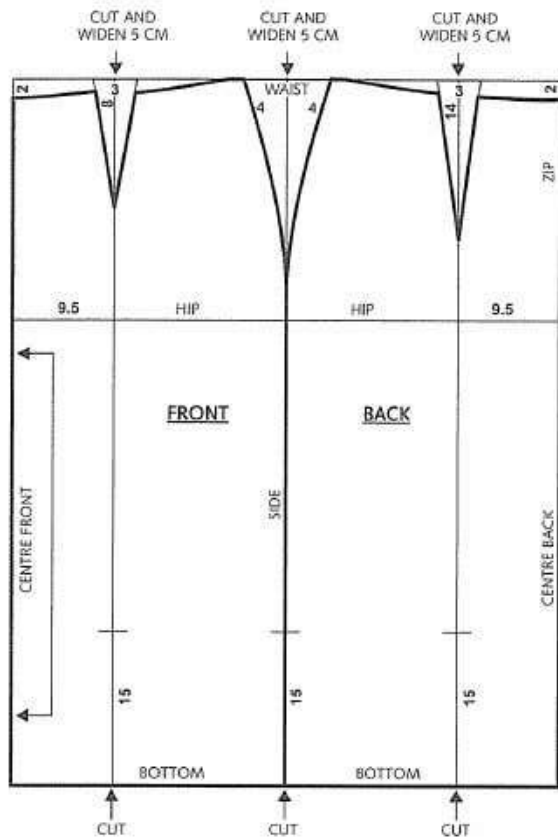
Waistband

The waistband should be made either of a lightweight knit or a fabric casing a soft elastic, with eyelets to regulate the front as the belly grows.



FABRIC WAISTBAND CONTAINING AN ELASTIC WITH EYELETS

PEG-TOP SKIRT



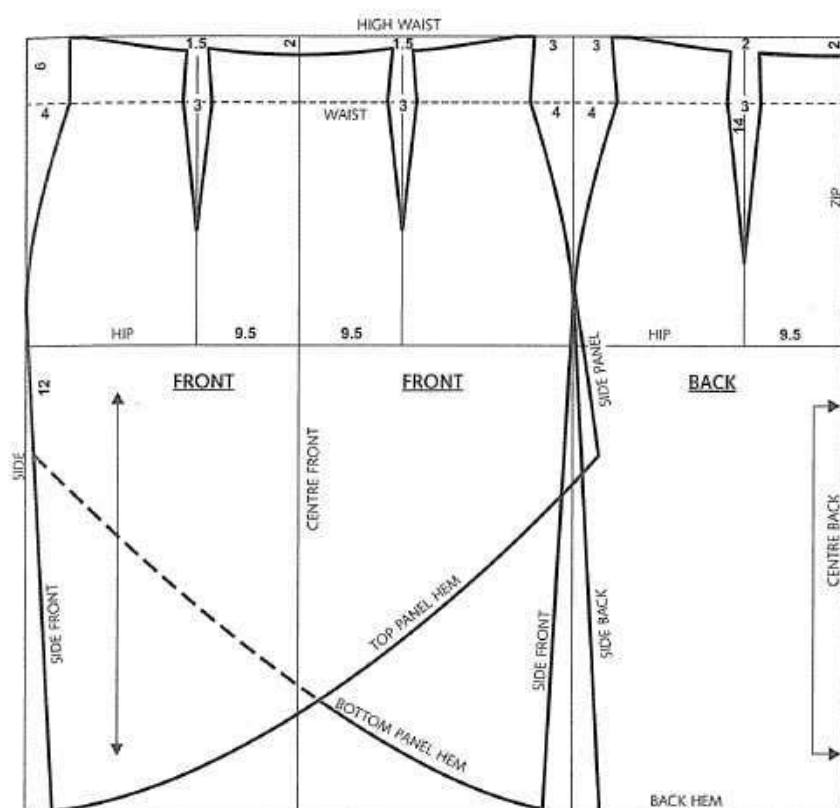
The peg-top skirt is wide at the top, with gathers at the waist and fullness around the hips.

The peg-top skirt's shape is achieved through the positioning of the darts in the front and in the back, and the narrowing at the hemline.

- Extend the central line of the front and back darts down to the hem.
- Cut along these lines and along the side.
- Widen at the waist from 1.5-5.5 cm for each cut, depending on the fullness desired.
- Overlap the cut pieces at the hem from 0.5-2.5 cm, depending on the fullness chosen.
- As you cut the pieces, paste them onto another sheet of paper, checking the measurements of the openings.
- Complete both the waist and the hemline using curved lines.

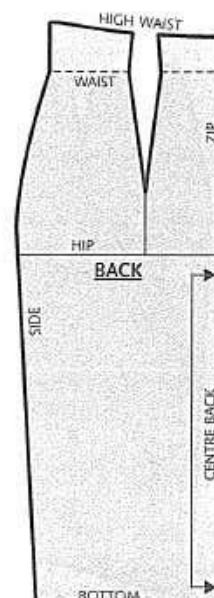
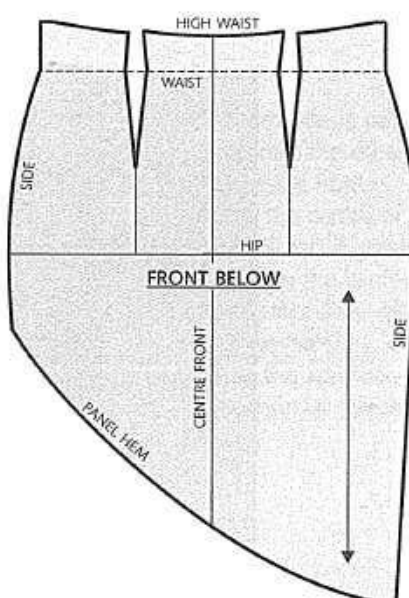
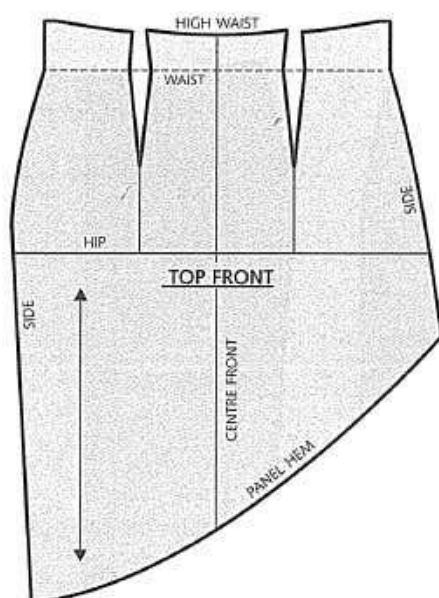
Note: If the fabric permits, this skirt can be made with just a single seam in the back.

HIGH-WAISTED ASYMMETRICAL SKIRT



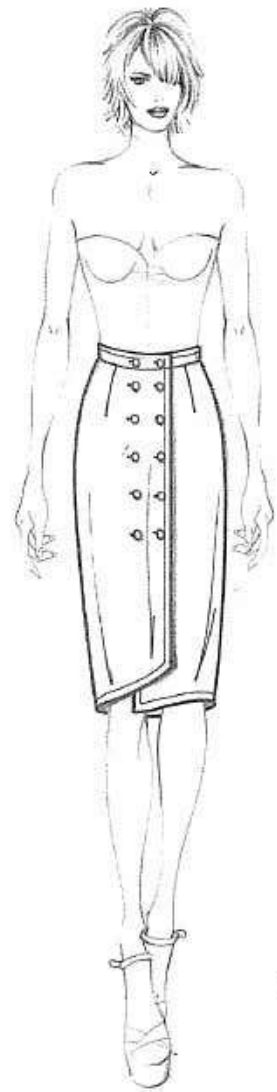
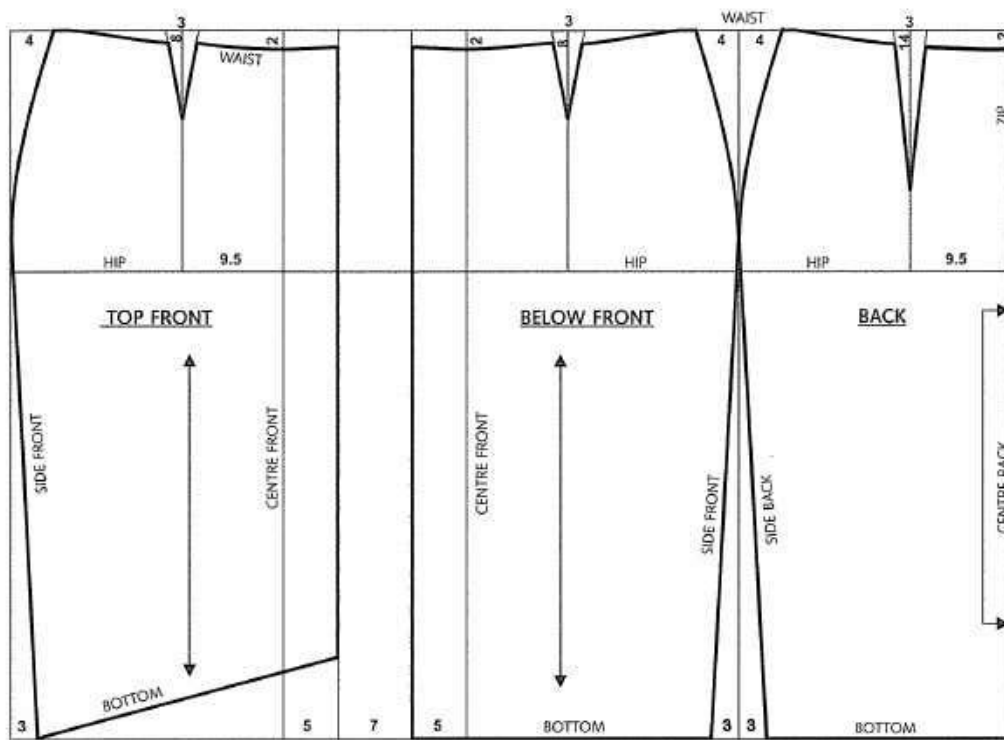
The pattern with overlap is made constructing the front in one piece (or the back, if the overlap is in the back), so as to be able to draw the asymmetrical cuts or motifs.

- Draw the basic pencil skirt pattern with a high waist and the outline of the darts.
- Alongside the centre front, construct the opposite side of the front.
- Outline the top front panel line, going beyond the pattern's side seam and the bottom panel with the same outline as far as the side.
- Copy the parts on another sheet of tissue paper for patterns.

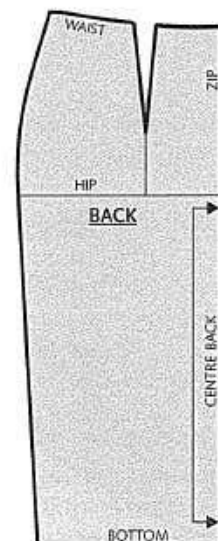
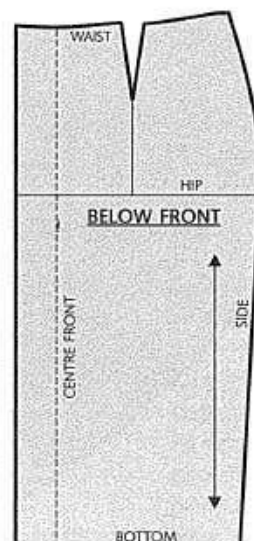
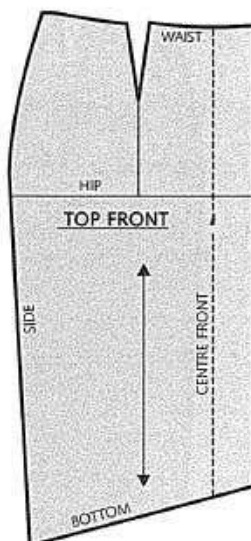
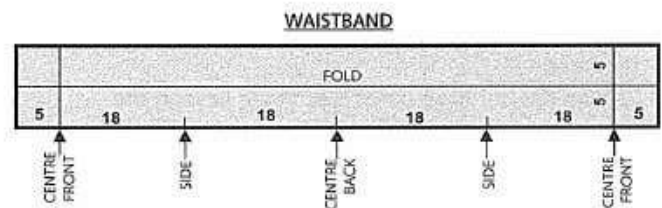


ASYMMETRICAL SKIRT

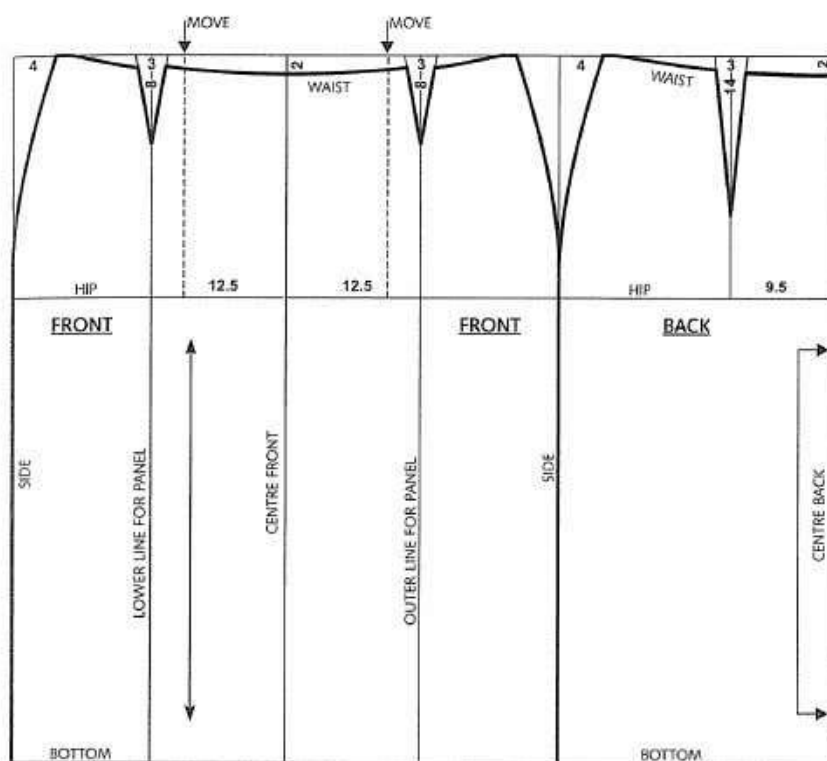
BUTTONED IN THE FRONT



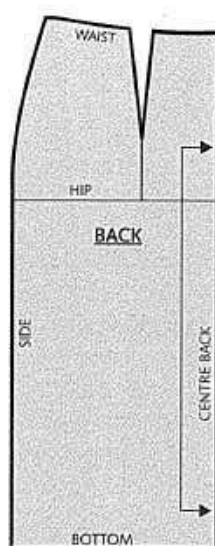
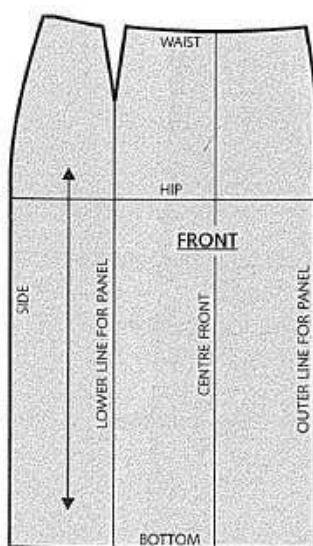
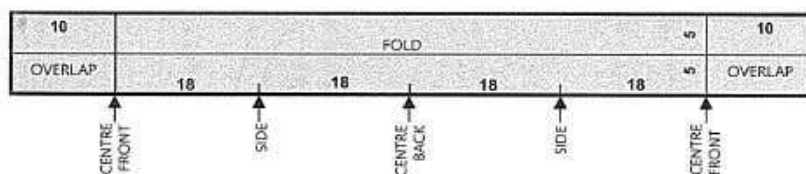
- Draw the basic pattern of the pencil skirt.
- Reduce the bottom hem by 3 cm.
- Draw the extension of the centre front for the closure overlap of 5 cm.
- Construct alongside the centre front the opposite, a mirror image of the Top front.
- Shape the lower edge of the Top front.



FRONT-WRAP SKIRT

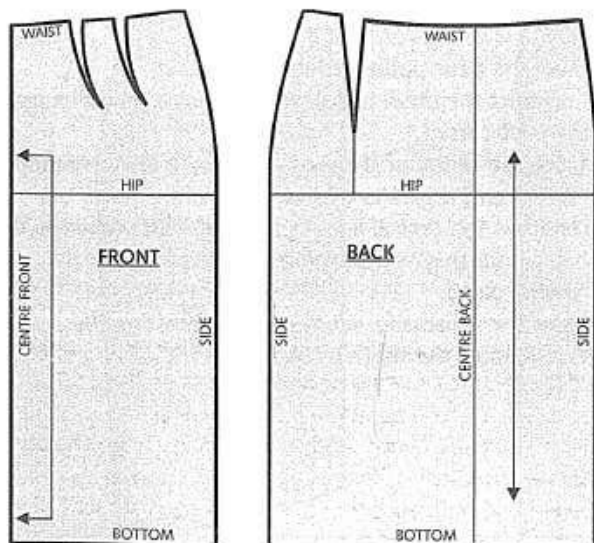
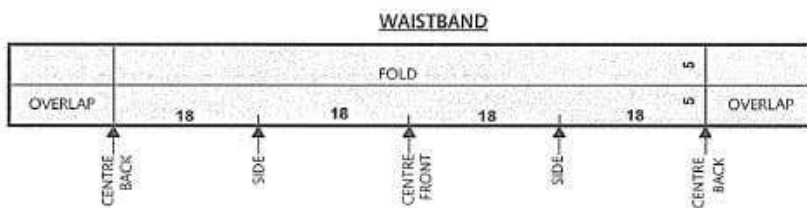
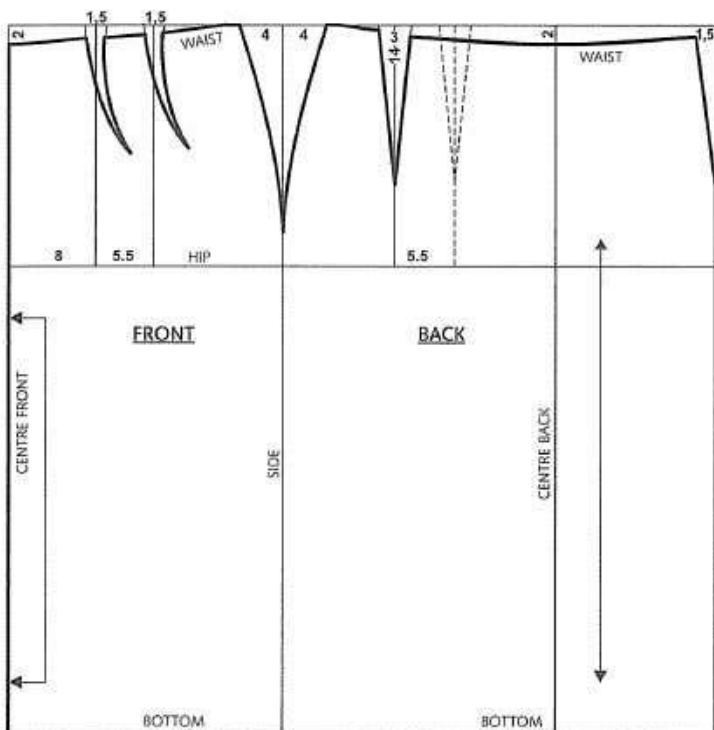


WAISTBAND



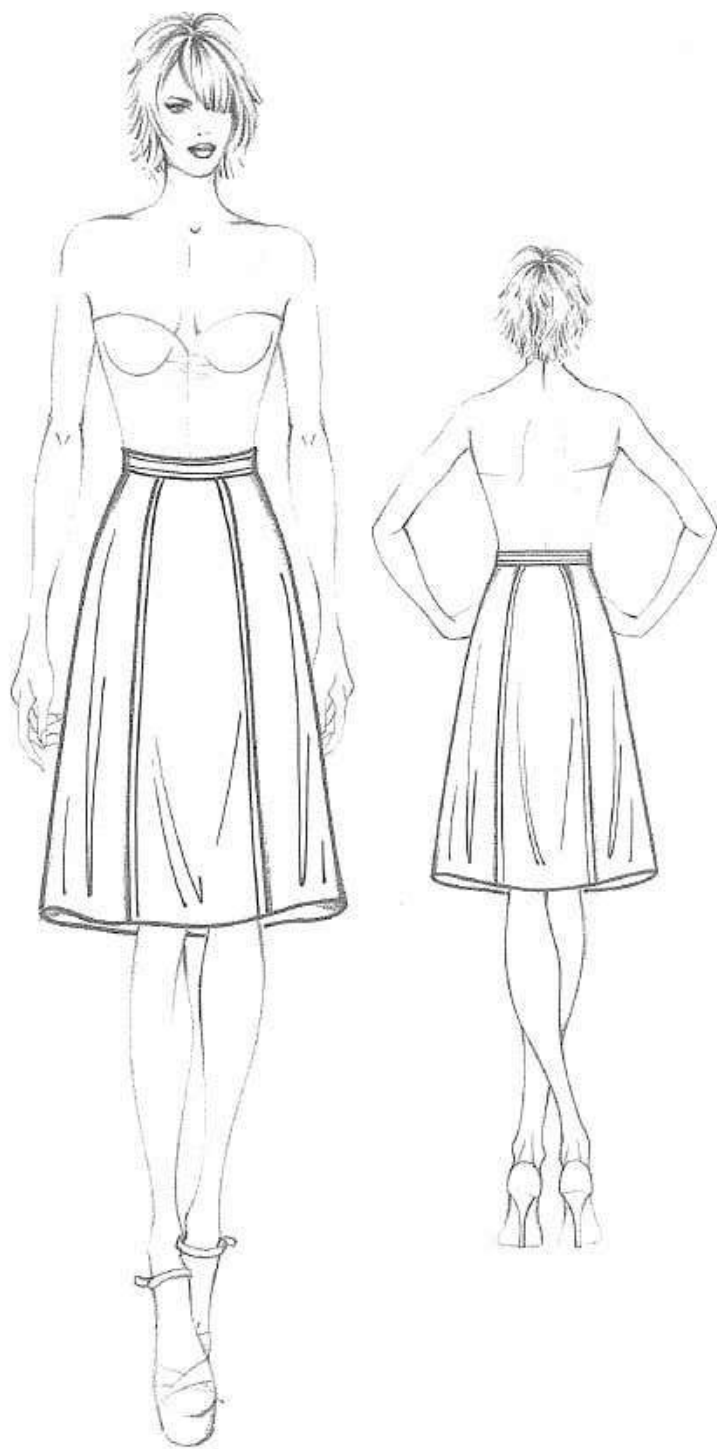
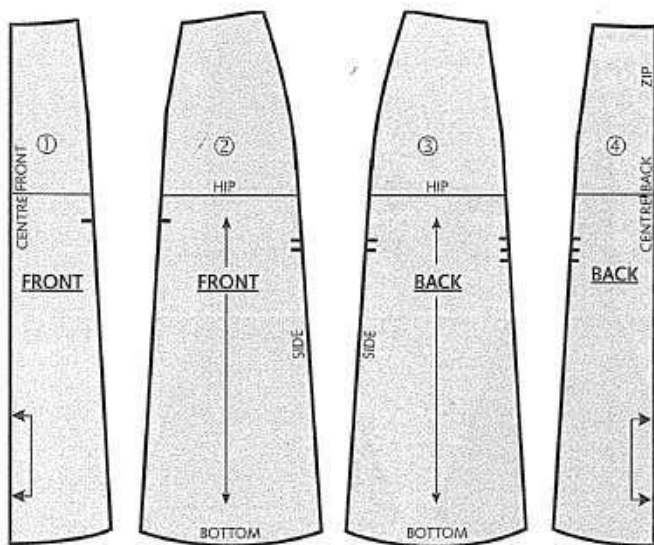
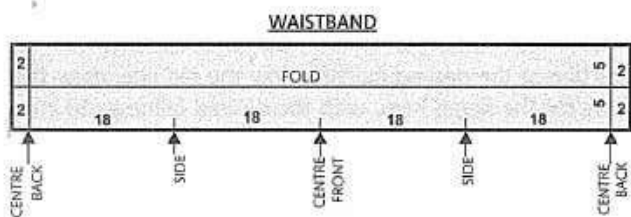
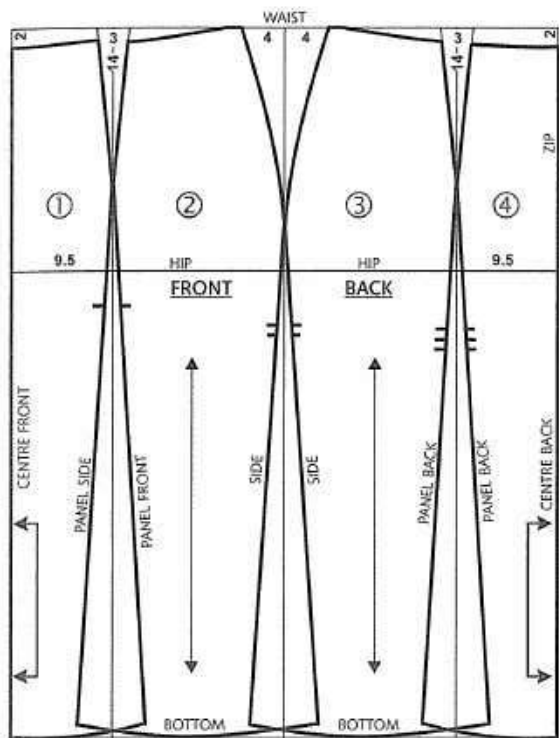
- Draw the basic pattern of the pencil skirt.
- Construct the other half of the front as a mirror-image of the centre front.
- Move the centre of the waist darts by a few centimetres (e.g.: 3 cm) if greater overlap is desired.
- Lengthen the central line of the waist darts down to the hem, since they will be the reference points for the overlap panel.
- Make the waistband, if called for, calculating the extension of the skirt's wrap panel.

BACK-WRAP SKIRT



- Draw the basic pattern of the pencil skirt.
- Construct the other half of the front as a mirror-image of the centre back.
- Move the centre of the waist darts by a few centimetres (e.g.: 5 cm) if greater overlap is desired.
- Lengthen the central line of the waist darts down to the hem, since they will be the reference points for the overlap panel.
- Make the waistband, if called for, calculating the extension of the skirt's wrap panel.

6-PANEL SKIRT

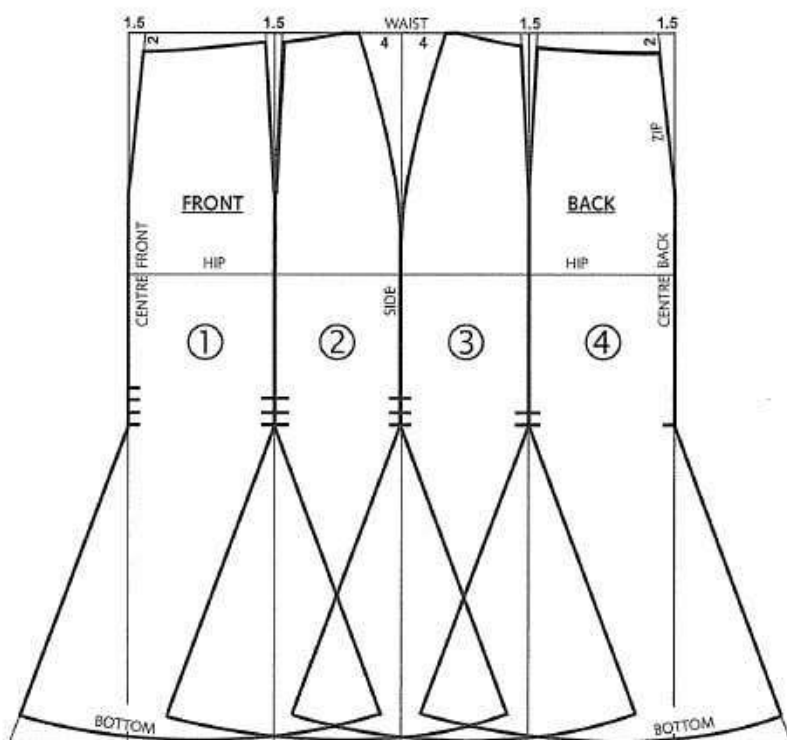


This skirt has three flared panels in front and three in back, and therefore has six seam lines.

The panels, then, are wider at the hemline than at the hip.

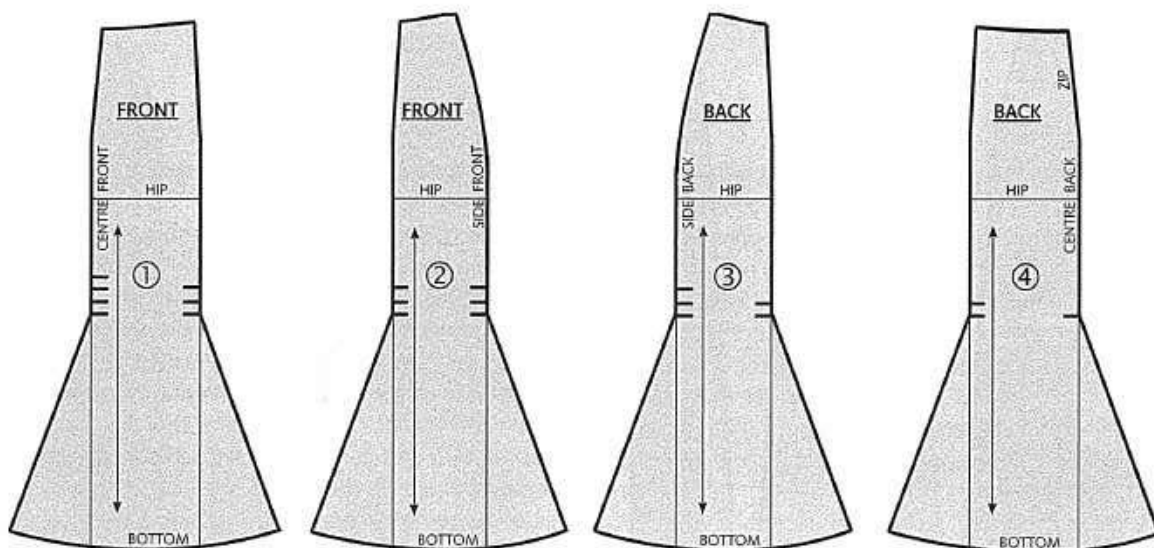
- Draw the basic pencil skirt block.
- Position the waist darts where the seam lines are desired, drawing a vertical line from the waist to the hem.
- Create the flare of each panel by widening the bottom on either side of the centre dart line drawn previously.
- Copy each panel, bearing in mind that the panels placed centre front and centre back are half-panels and therefore are positioned on the fold.
- Make all the reference marks, including the straight of grain arrows and the match-up notches.

8-PANEL SKIRT

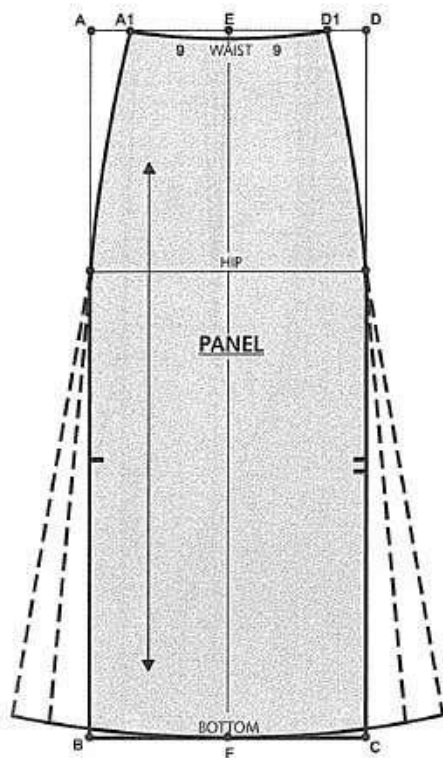


- Draw the basic pattern of the pencil skirt.
- Move the centre of waist darts to the centre front and to the centre back, dividing the width of the waist darts in 4 equal parts and distributing them above, between the centre front, the centre back and the two waist darts, thus obtaining perfectly balanced panels at the waist.

- Starting at the desired height below the hip line, draw the lines for the flared hem, with the desired fullness (10 cm per section).
- Make all the reference marks, including the straight of grain arrows and the match-up notches.

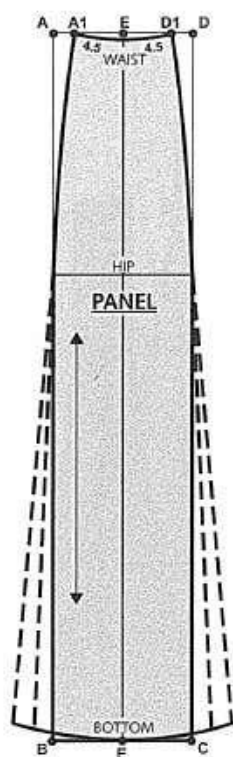


CONSTRUCTION OF THE SINGLE PANEL



4-PANEL SKIRT

- Draw a rectangle A-B-C-D, with:
- A-B equal to the desired skirt length (65 cm).
- B-C equal to $\frac{1}{4}$ of the hip circumference plus ease (25 cm).
- Draw E-F, where E is midway between A and D.
- A1-D1 equal to $\frac{1}{4}$ of the waist circumference (18 cm).
- If you want a panel a-line skirt, you must flare the fabric at the bottom, by the desired measurement (2.5-7.5 cm).
- Draw all the symbols, the notches and the grain.

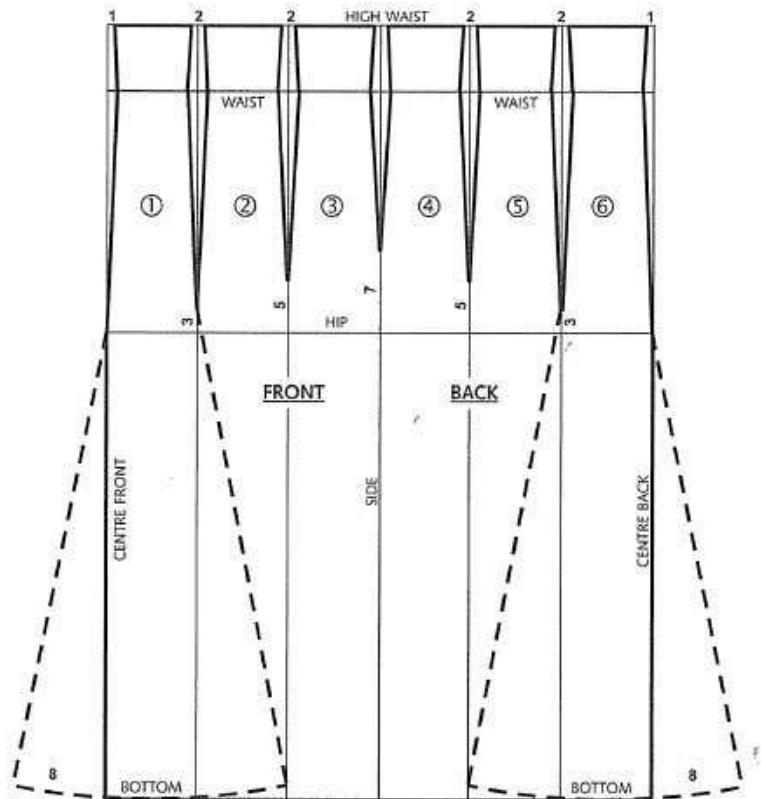
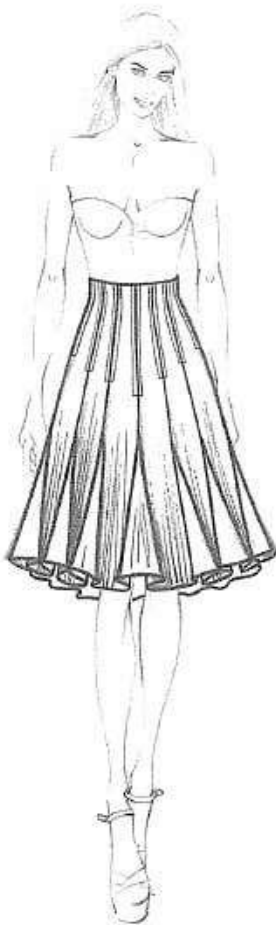


8-PANEL SKIRT

- Draw a rectangle A-B-C-D, with:
- A-B equal to the desired skirt length (65 cm).
- B-C equal to $\frac{1}{8}$ of the hip circumference plus ease (12.5 cm).
- Draw E-F, where E is midway between A and D.
- A1-D1 equal to $\frac{1}{4}$ of the waist circumference (9 cm).
- If you want a panel a-line skirt, you must flare the fabric at the bottom, by the desired measurement (1.5-4.5 cm).
- Make all the reference marks, the notches and the straight of grain.



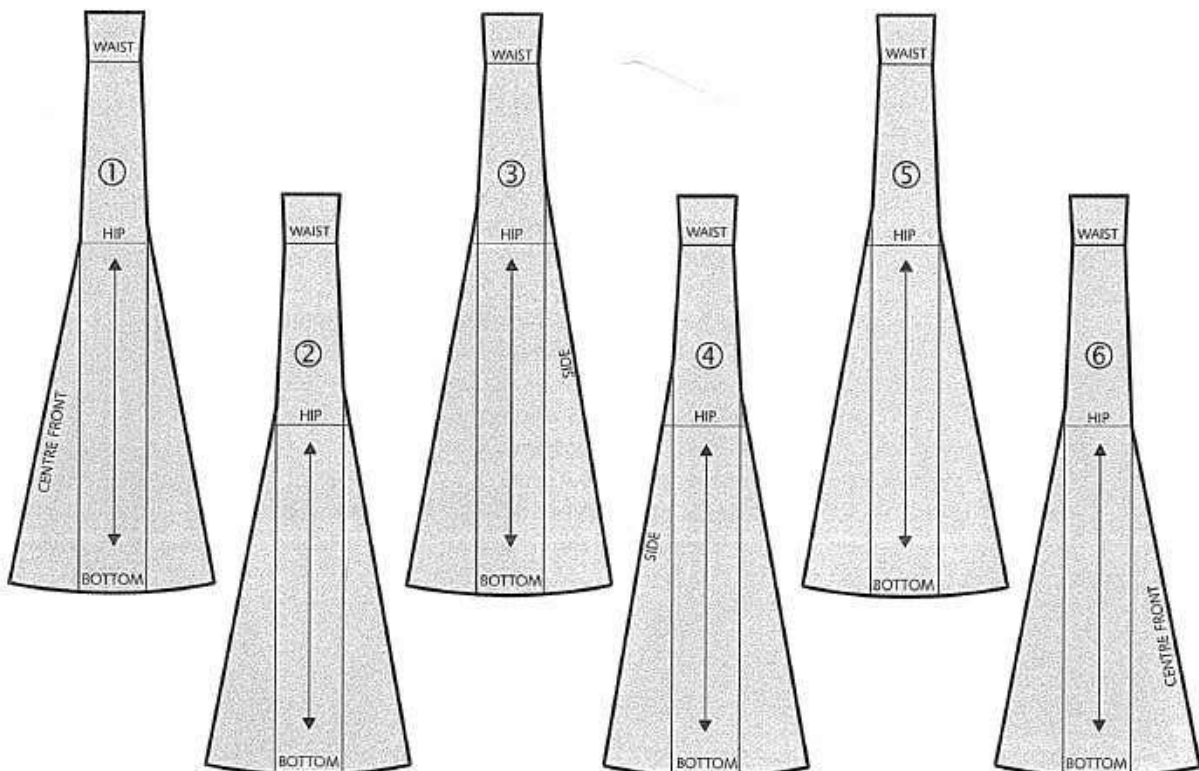
12-PANEL FANCY SKIRT



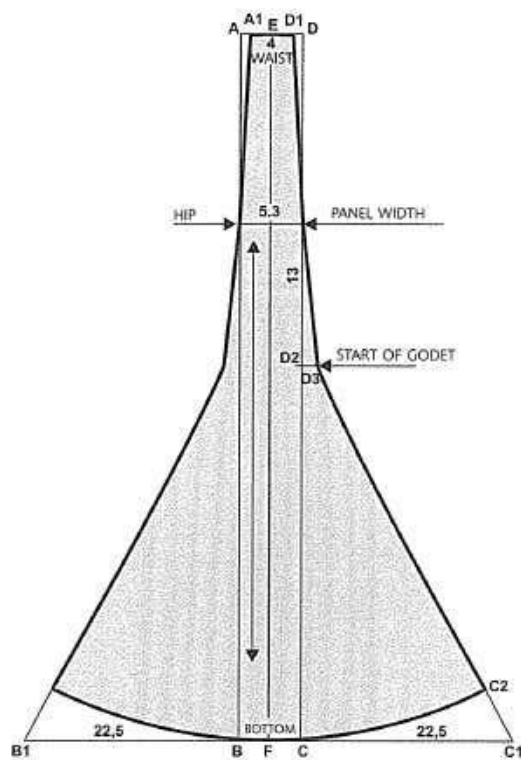
- Draw the basic pattern of the pencil skirt with high waist.
- Divide the hip circumference in 6 equal parts and draw the lines from the waist to the bottom.
- Divide the difference between the hip circumference and the waist circumference in 6 equal parts and draw the

waist darts, tapered at the top and bottom.

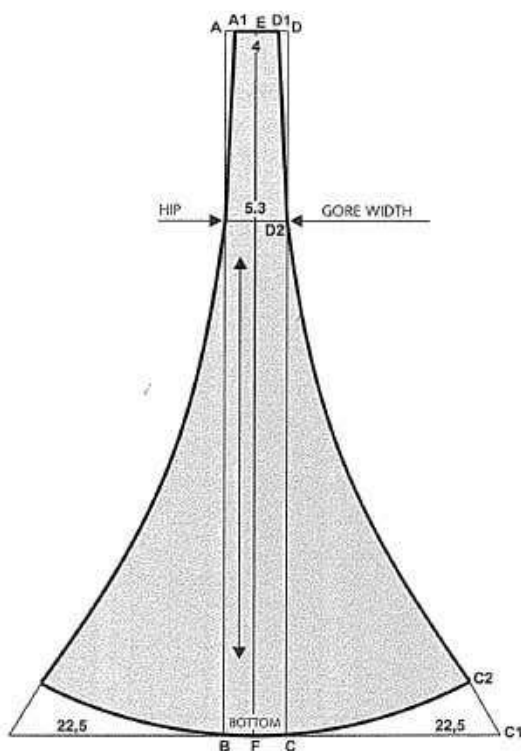
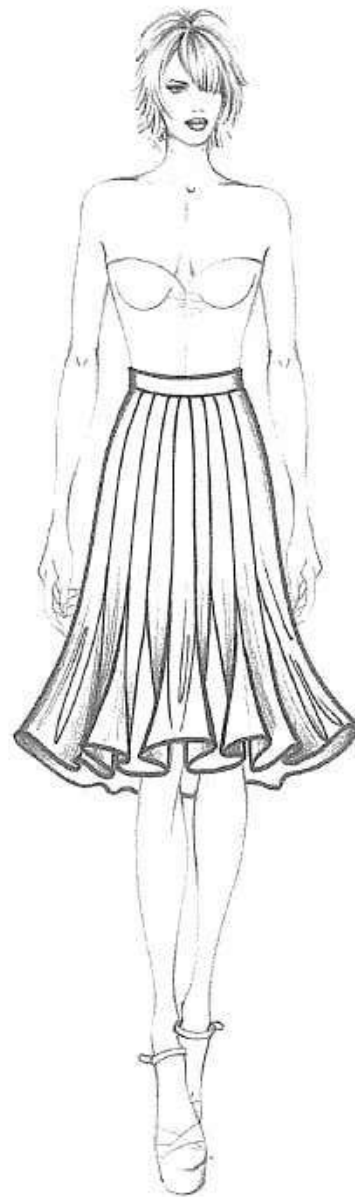
- Make the flares at the hem as desired or according to the figure.
- Draw the facing for the high waist.
- Mark the straight of grain and the notches on all the panels.



PANEL FOR 18-PANEL SKIRT



1st VERSION

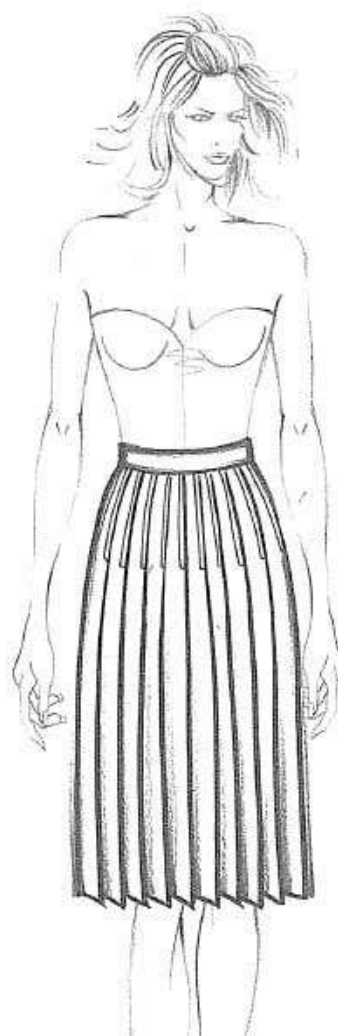
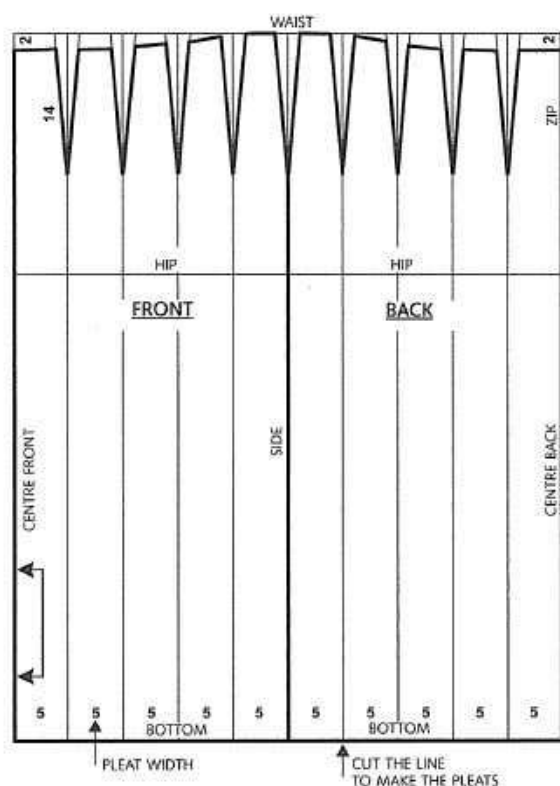


2nd VERSION

- Draw a rectangle of the skirt A-B-C-D with:
- A-B equal to the desired skirt length (65 cm).
- B-C equal to $\frac{1}{18}$ of the hip circumference plus ease (5.3 cm).
- Draw E-F, where E is midway between A and D.
- A1-D1 equal to $\frac{1}{18}$ of the waist circumference (4 cm).
- Flare the fabric at the bottom, by the desired measurement (25.5 cm per section), and with the desired shape
- D3-C2 like D2-C, less 2-3 cm depending on the fabric.
- Draw all the symbols, the notches and the straight of grain.

PLEATED SKIRTS

KNIFE PLEATS



Knife pleats keep the same width and depth for the full length of the skirt.

So, in making the pattern, the dimension remains the same, top and bottom.

A pleat is made up of a visible outer fold and a hidden, inner fold.

To make the pleats, it is necessary first of all to decide the desired width (e.g.: 5 cm pleat).

Then the number of pleats to be made has to be calculated. This is done by dividing the hip circumference by the width of the pleats (e.g.: Hip circumference 100 cm: 5 = 20 pleats).

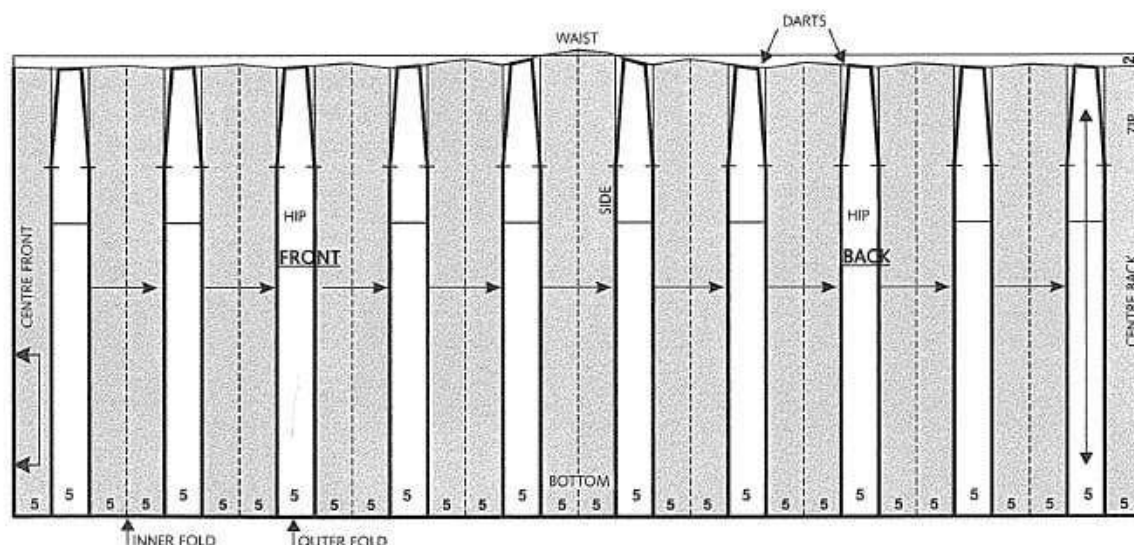
Or, to find the width of the pleats, hip circumference divided by the desired number of pleats.

To know how much fabric is needed for a pleated skirt, multiply by three the hip circumference plus the seam allowance (e.g.: $100 + 6 \text{ cm} = 106 \times 3 = 3.18 \text{ m}$).

The pleats must fold to the left.

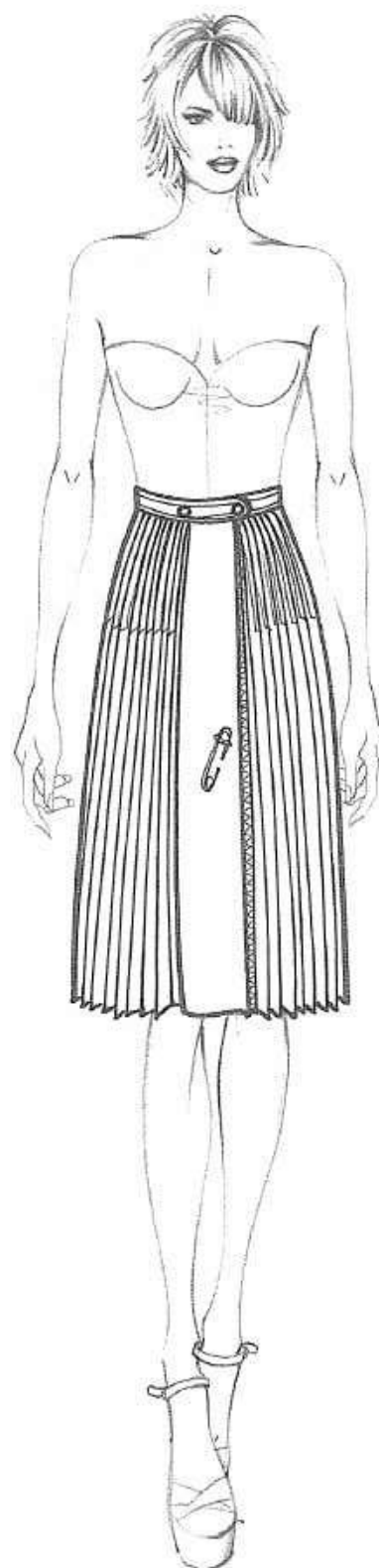
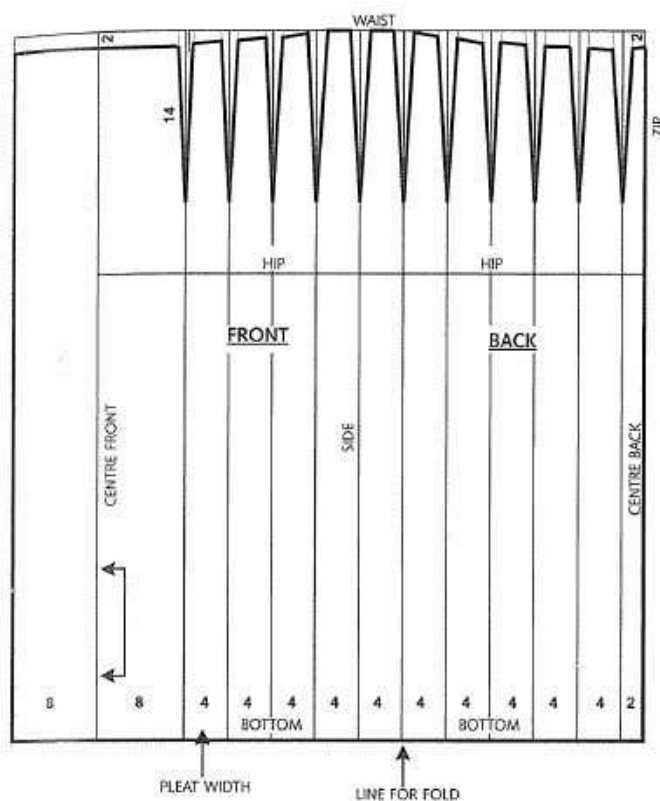
The width of the waist darts should be divided by the number of pleats (e.g.: $28: 20 = 1.4 \text{ cm}$).

The darts are 12-15 cm in length and there should be a dart in every pleat.

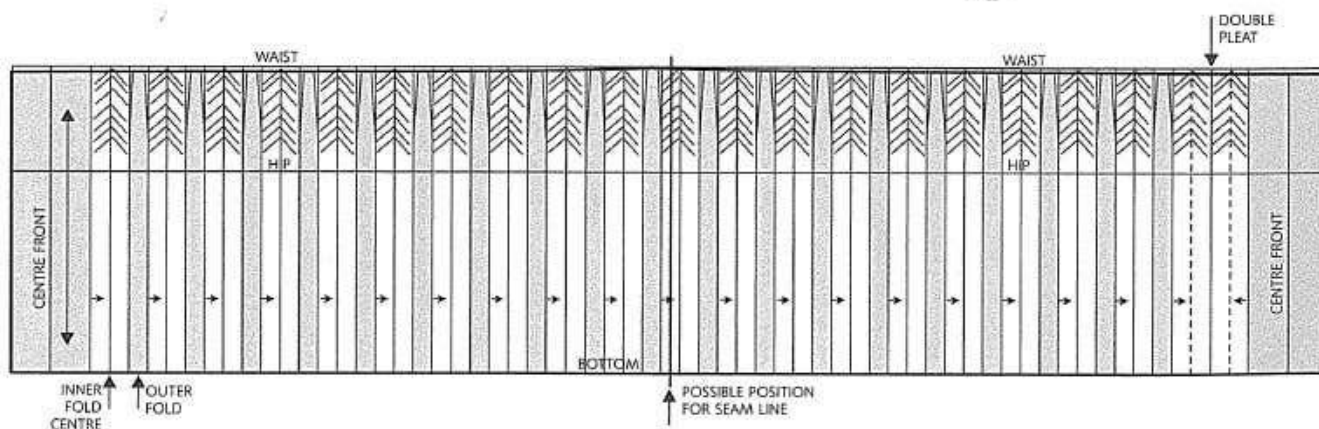


Note: In industrial production, there must be an even number of pleats in order to have an homogeneous size grading.

THE KILT



- Make the basic pattern of the pencil skirt.
- Add 8-10 cm to the centre, for overlap.
- Divide the entire circumference of the skirt in equal parts, starting with a large piece such as the overlap and continuing with approximately 4-cm folds.
- Divide the dart width into equal parts based on the number of pleats, and make them all the same length (14 cm).
- Cut the pleat strips and paste them onto another sheet of paper, leaving twice their width between them.
- End with a double pleat to match with the initial overlap.



PLEATS FOR SKIRTS

Pleats are portions of fabric folded over one another and they can be *flat*, *inverted*, or *box pleats*.

CALCULATING MEASUREMENTS FOR PLEATS

- The waist circumference, including ease (2-4 cm), divided by the pleat width gives the number of pleats.
Or, if the result is not an even number:
- The waist circumference plus ease, divided by the pleat width, gives the number of pleats (e.g.: waist circumference 96 cm : 6 = 16 pleats; waist circumference 96 cm : 5 = 19.2 pleats).

In the second case, we cannot make 19.2 pleats, so we have to divide the waist circumference by the number of pleats, which gives us a pleat width of 4.8 cm (e.g.: 96 cm : 20 pleats = 4.8 cm).

Note: In industrial production, the pleats must be 4 or 2 cm, for reasons of size grading.

CALCULATING THE FABRIC REQUIREMENTS

The interior part of the pleat is usually twice its width, so that $\frac{1}{3}$ of the total circumference goes to the pleat width and $\frac{2}{3}$ goes for their interior.

This means that to calculate how much fabric is needed for a pleated skirt, we multiply the hip circumference plus the seam allowance by 3.

(e.g.: Circumf. hip cm $96 + 4 = 100 \times 3 = 300$).

So, for a fabric that is 1.40 m high this means using two skirt-lengths plus 20 cm.

In this case, the missing centimetres could be taken from the inside of the pleats, which, instead of 12 centimetres could become 11 cm, but in any case we cannot remove more than 2 cm.

The seams should never be made on the visible side of the fold, nor at the edges of the fold, but hidden inside its depths.

STRAIGHT OF GRAIN

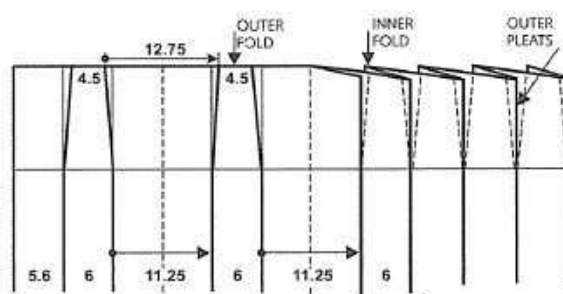
For perfect ironing of the pleats, it is indispensable to respect the straight grain of the fabric.

WAIST DARTS

With pleated skirts, the waist darts can be subtracted from the width of the pleat.

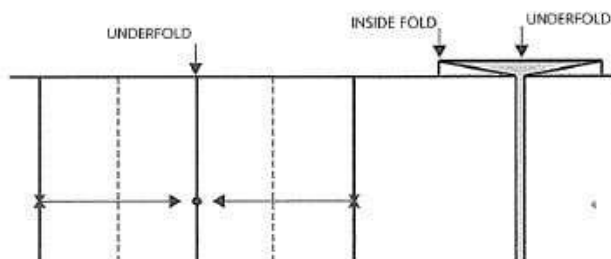
(e.g.: hip circ. 96 cm - waist circ. 72 cm = 24 cm : 16 pleats = 1.5 cm per pleat).

KNIFE PLEATS



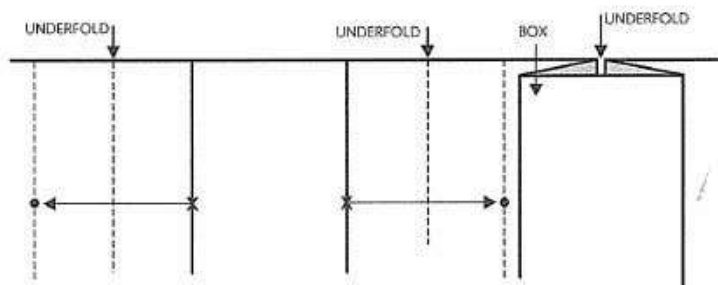
Knife pleats have an outer fold, visible on the right side of the skirt, and an inner fold, on the inside of the pleat.

INVERTED PLEATS



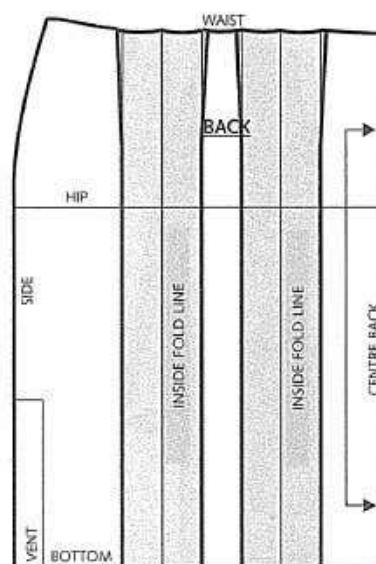
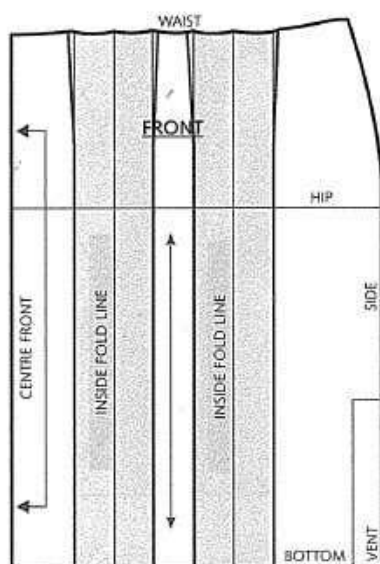
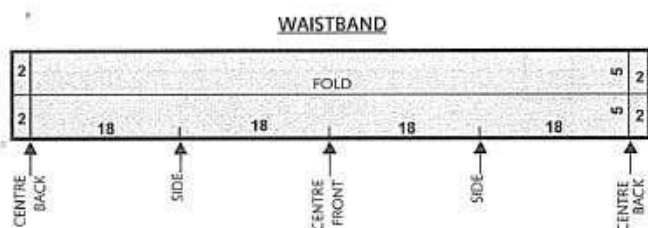
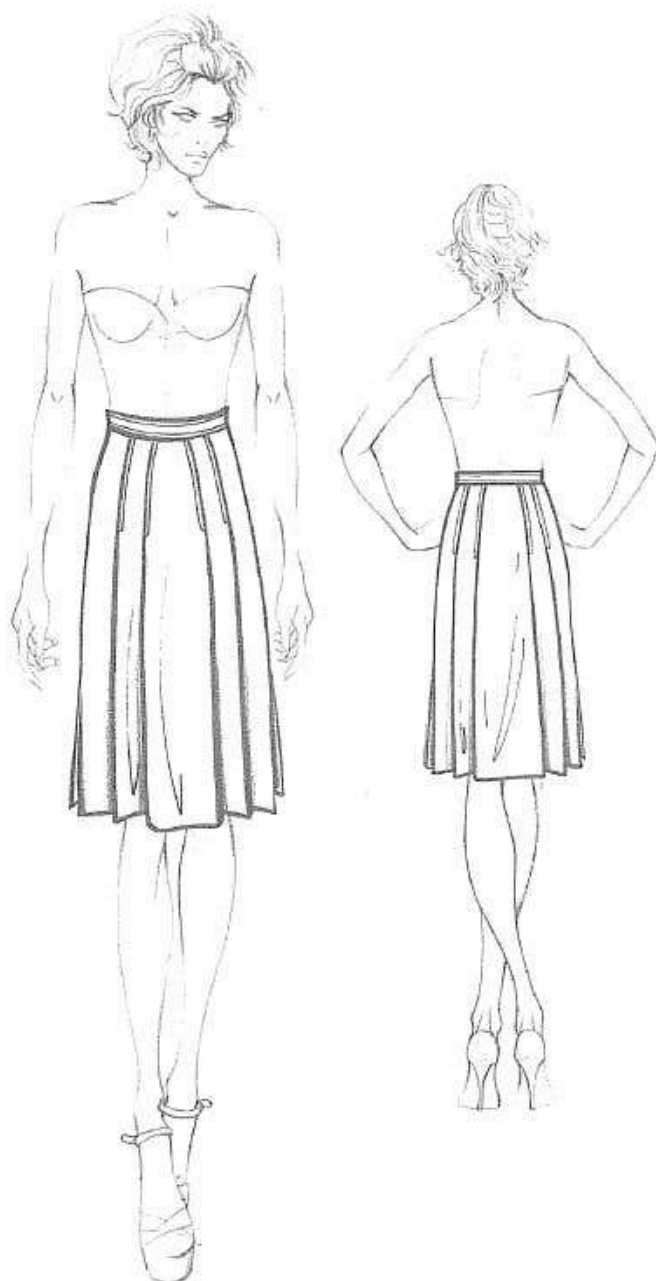
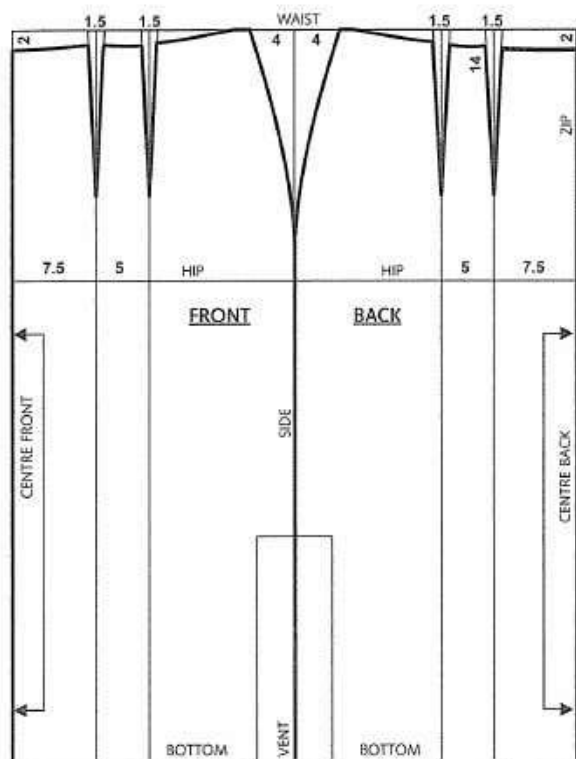
They are made up of two knife pleats folded one facing the other, forming an underfold inside.

BOX PLEATS

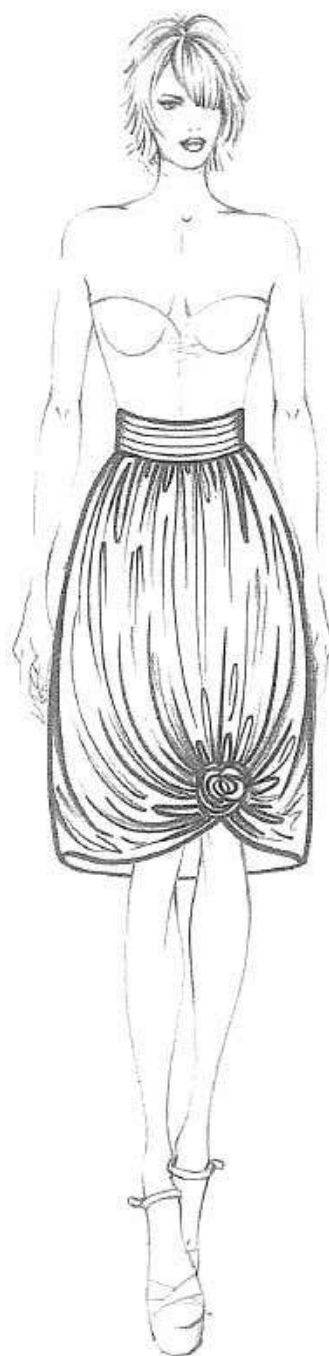
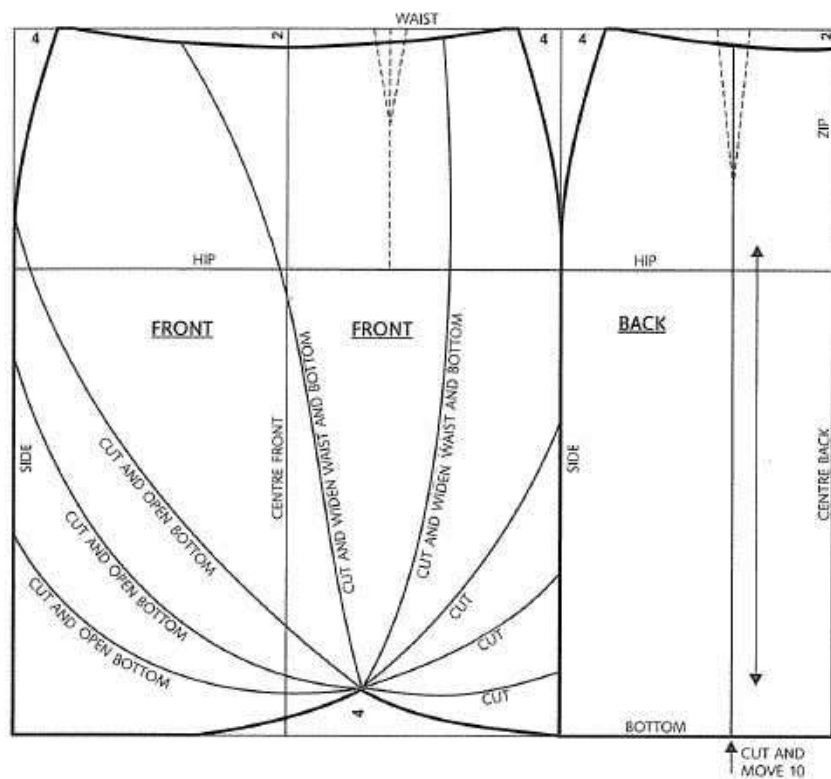


Box pleats are two divergent knife pleats, folded in opposite directions.

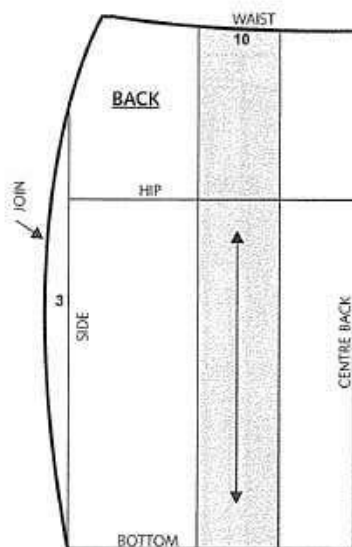
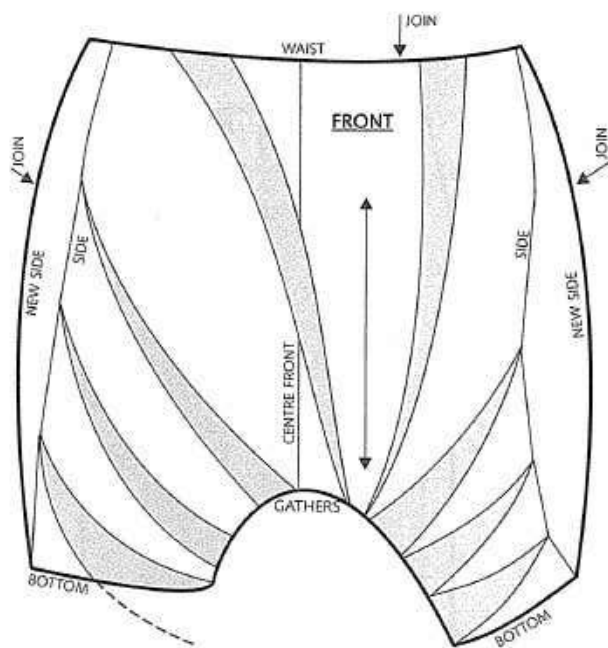
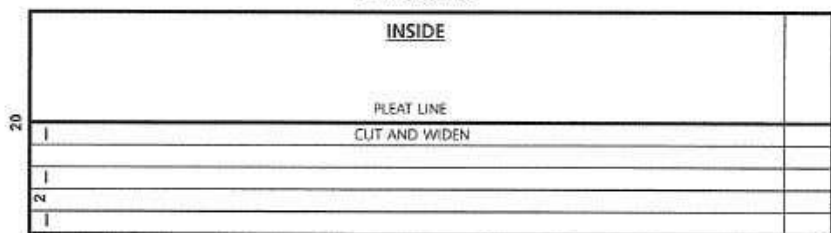
FANCY PLEATED SKIRT



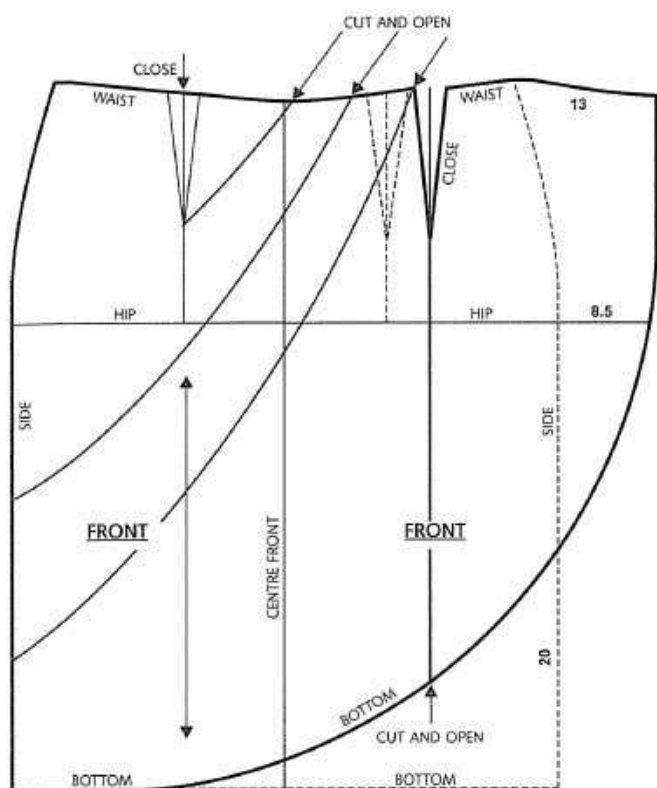
FANCY DRAPED SKIRT



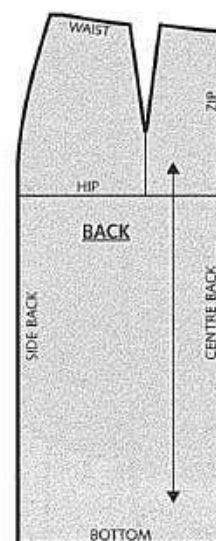
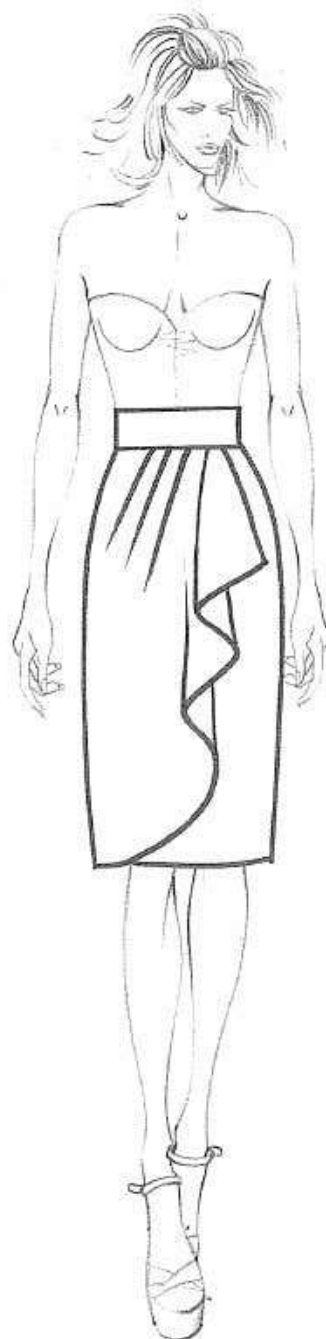
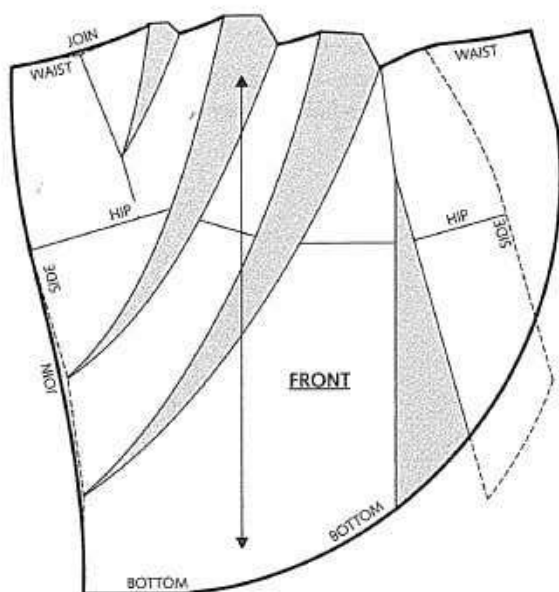
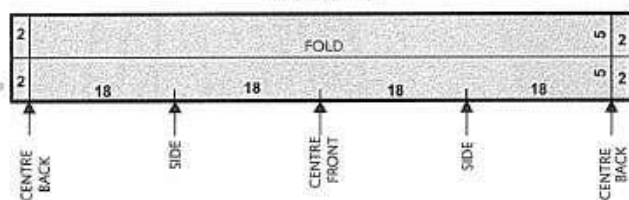
WAISTBAND



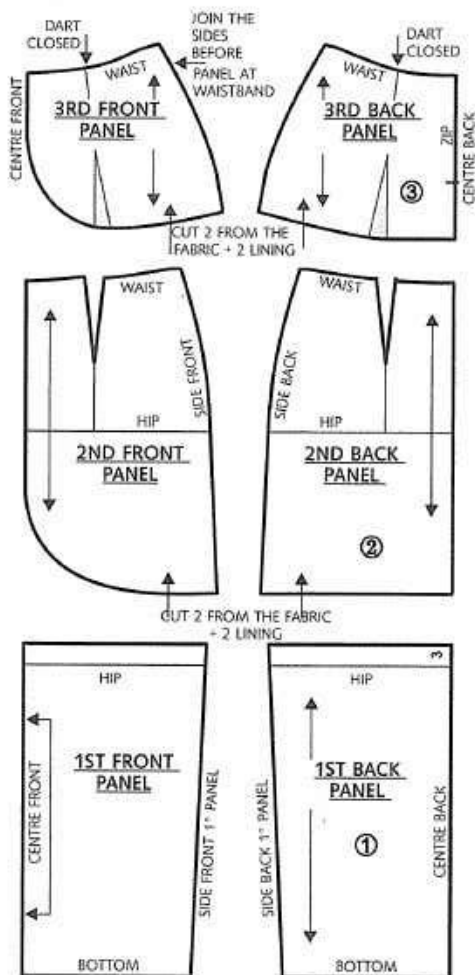
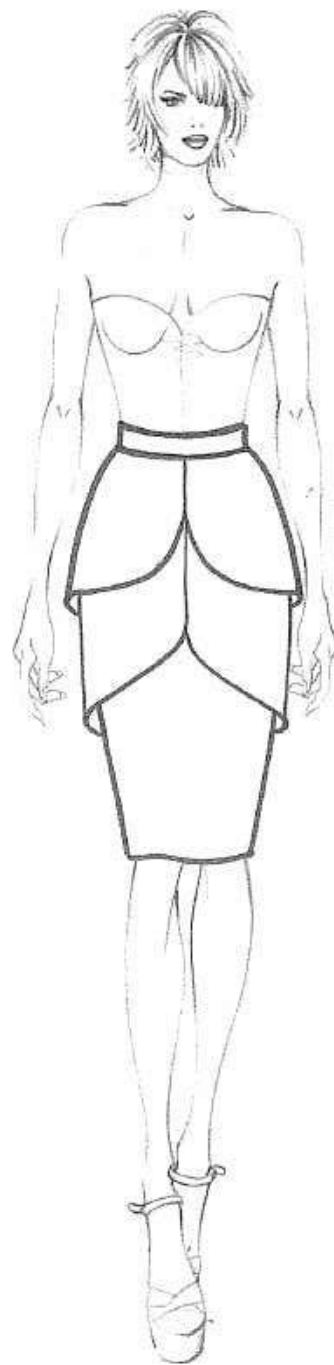
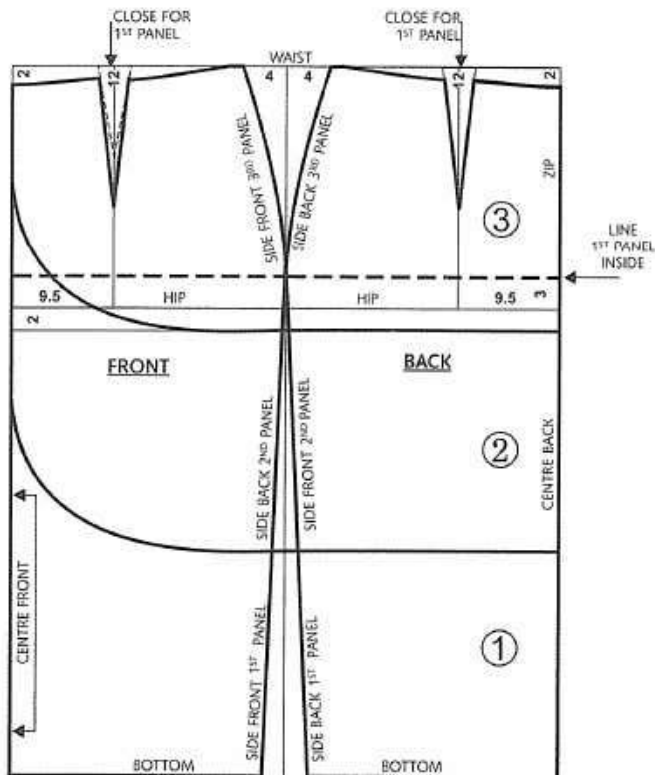
ASYMMETRICAL SKIRT



WAISTBAND



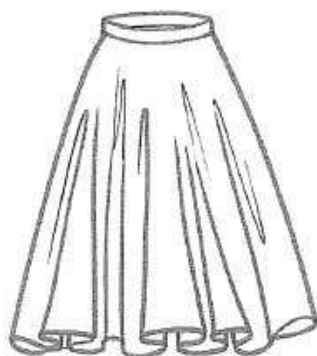
FLOUNCED SKIRT



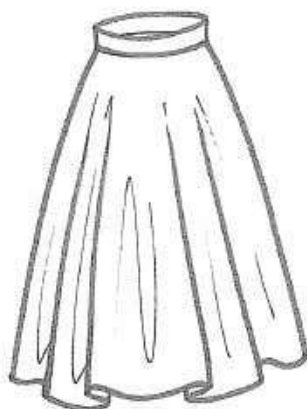
- Draw the basic pattern of the pencil skirt.
- Draw the outlines of the three skirts at desired lengths, as shown in the figure.
- The first panel should end 3 cm above the hip, and be sewn on the lining, so as to keep the waistline free of bulk.

CIRCULAR SKIRTS

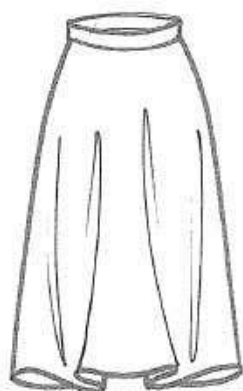
FULL - QUARTER - AND HALF CIRCLE SKIRTS



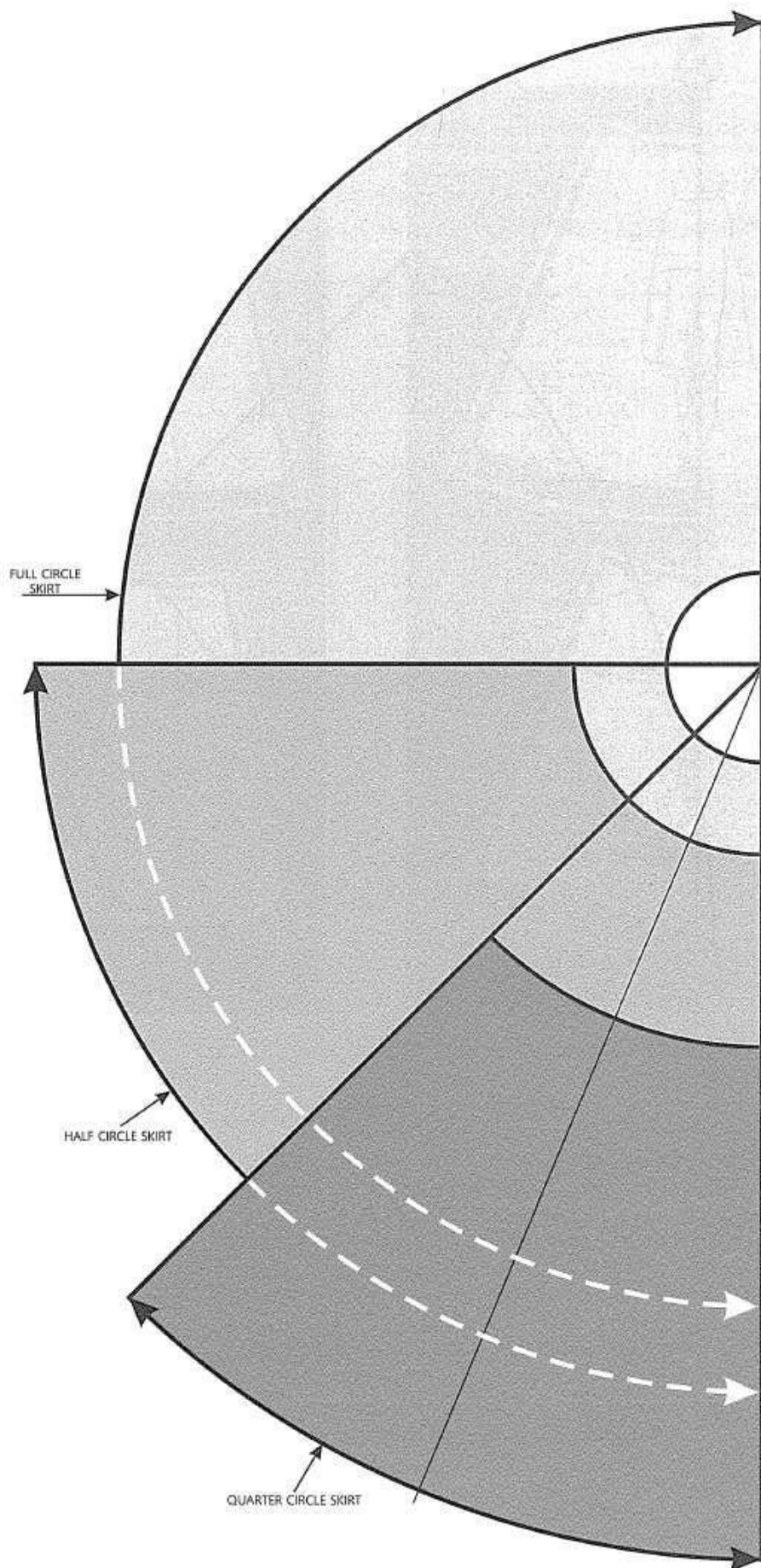
FULL CIRCLE

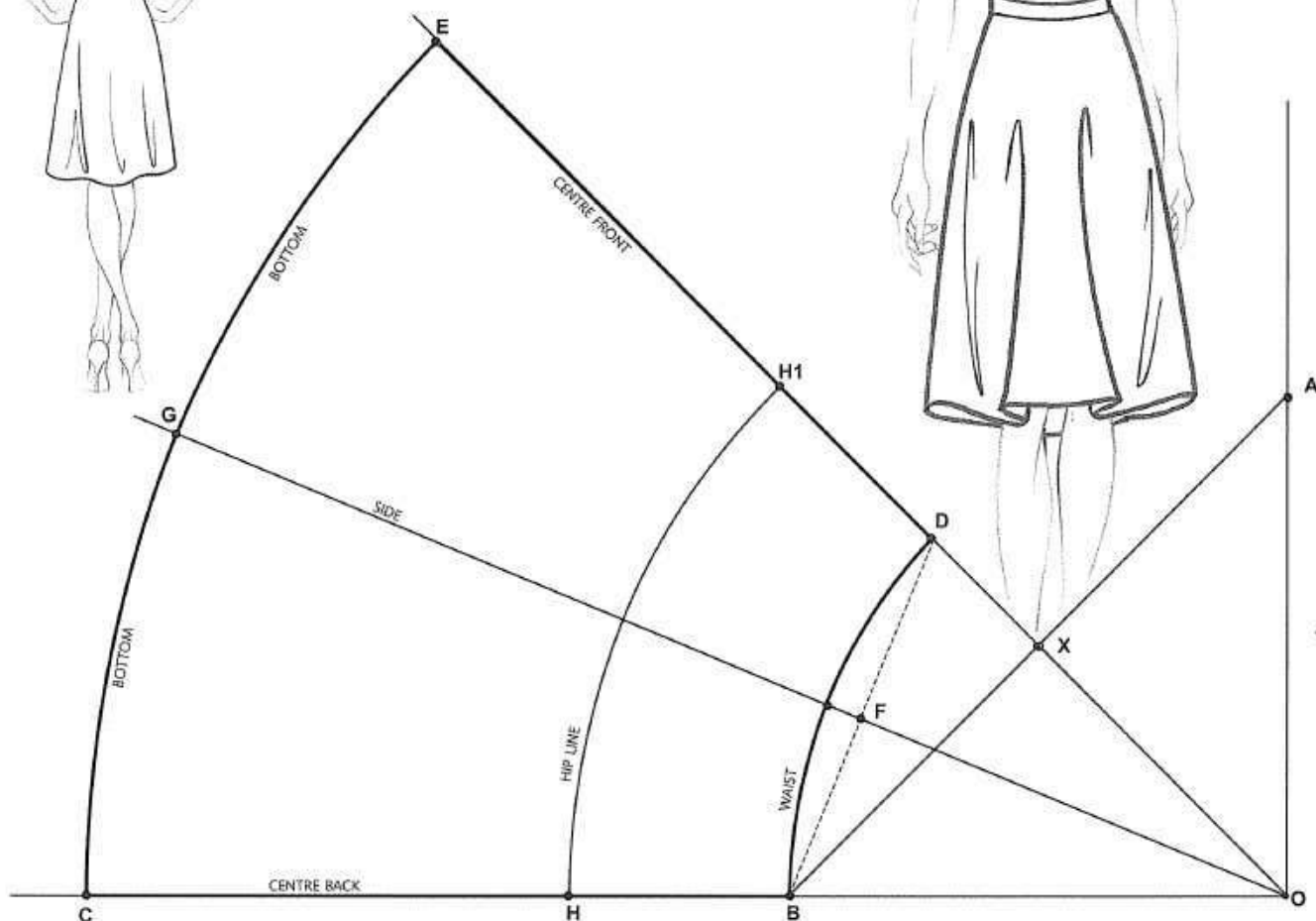


HALF CIRCLE

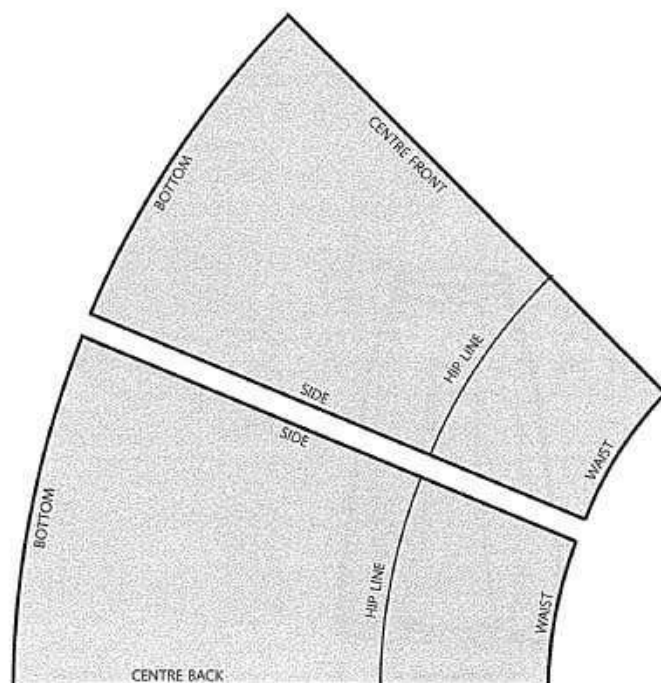


QUARTER CIRCLE

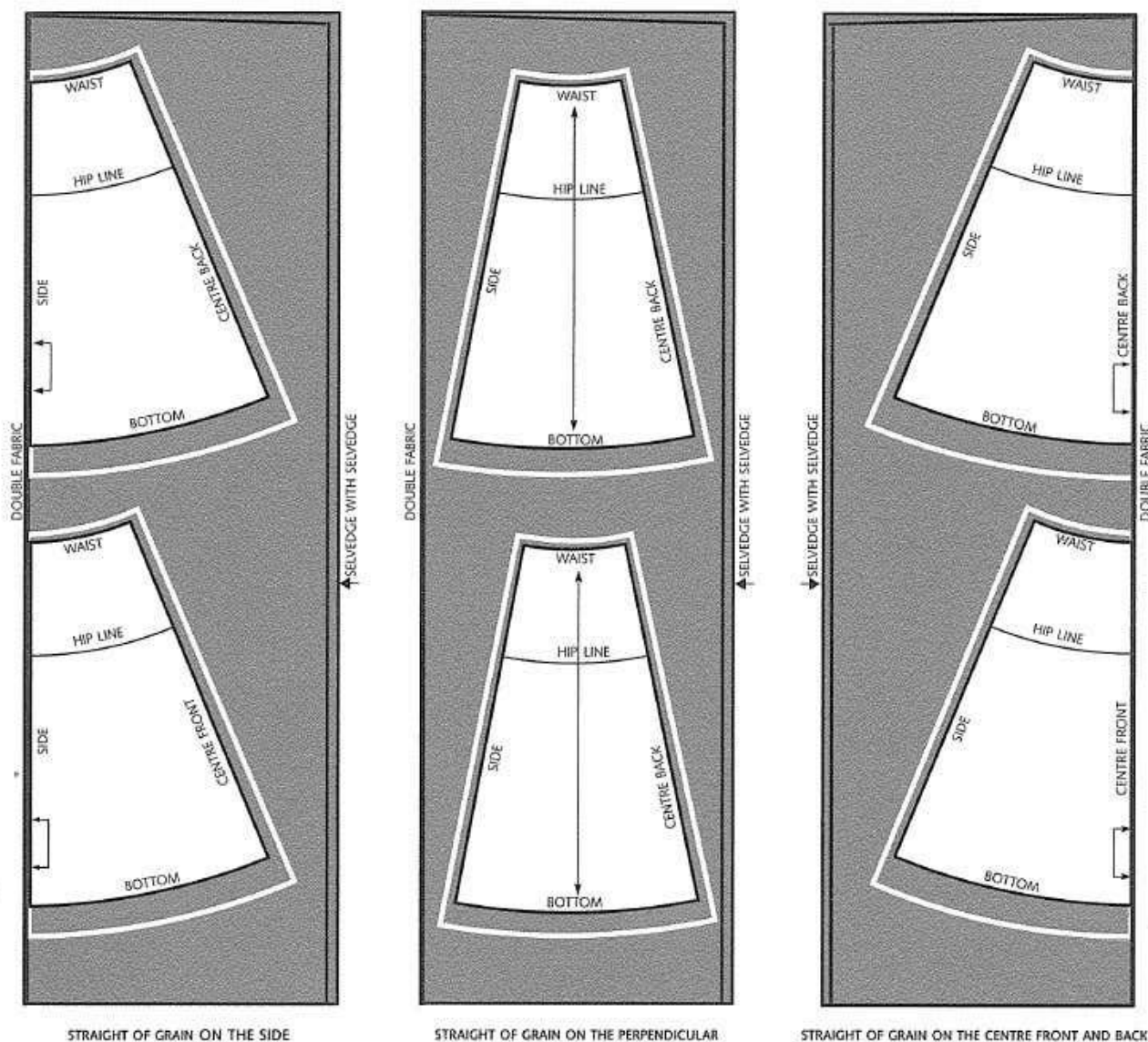




- Draw a right angle with the vertex O in the bottom right-hand corner of a sheet of paper.
- On the vertical axis and on the horizontal one, draw O-A and O-B, with a distance equal to half the waist circumference divided by 3.14 and multiplied by 4 (e.g.: $36 \text{ cm} : 3.14 = 11.5 \times 4 = 46$ (see the table).
- Make a straight line joining points A-B, divide it in half and mark the point with an X.
- Draw a straight line O-E, passing through X.
- Taking O as your pivot point, draw an arc between B-D (measuring half the waist circumference).
- Draw B-C measuring skirt length (65 cm) and write CENTRE BACK.
- D-E as B-C. Write CENTRE FRONT.
- Draw an arc C-E taking O as your pivot point and write BOTTOM.
- B-H Hip Height.
- Draw an arc H-H1 and write HIP LINE.
- Draw F at half B-D.
- Trace the point G at half C-E.
- Draw O-G. HIP Division Line.



QUARTER-CIRCLE SKIRT PATTERN LAYOUT



The $\frac{1}{4}$ -circle skirt may be positioned in any of three main ways:

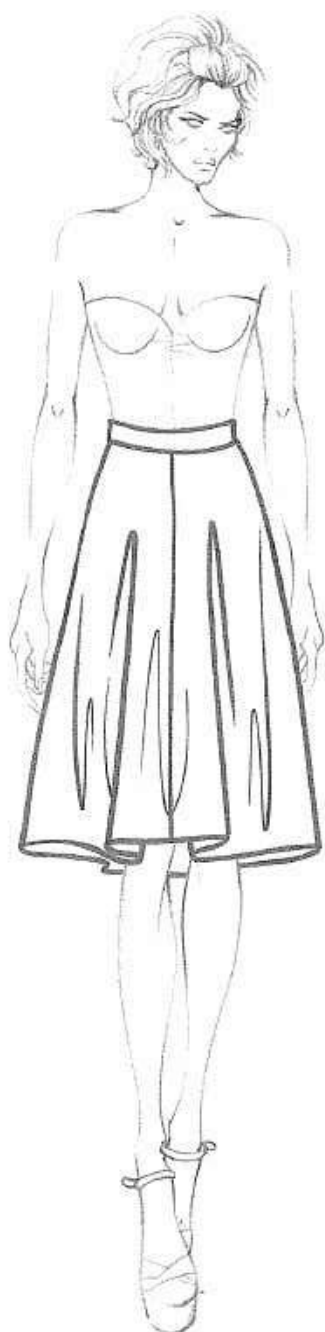
- 1) With the straight of grain on the side, positioning the side seam on the fold of the double layer of fabric. In this case, the skirt will have a front seam and a back seam, and no side seam.
- 2) With the straight of grain on the perpendicular line in the middle of the gore, positioning the gore perfectly centred on the double layer of fabric.

In this case, the skirt will have four seams: one in front, one in back and one on either side.

- 3) With the straight of grain on the centre front and the centre back, positioning the lines of the centre front and centre back on the fold of the double layer of fabric.

In this case, the skirt will have seams on either side and no seams on the front and back.

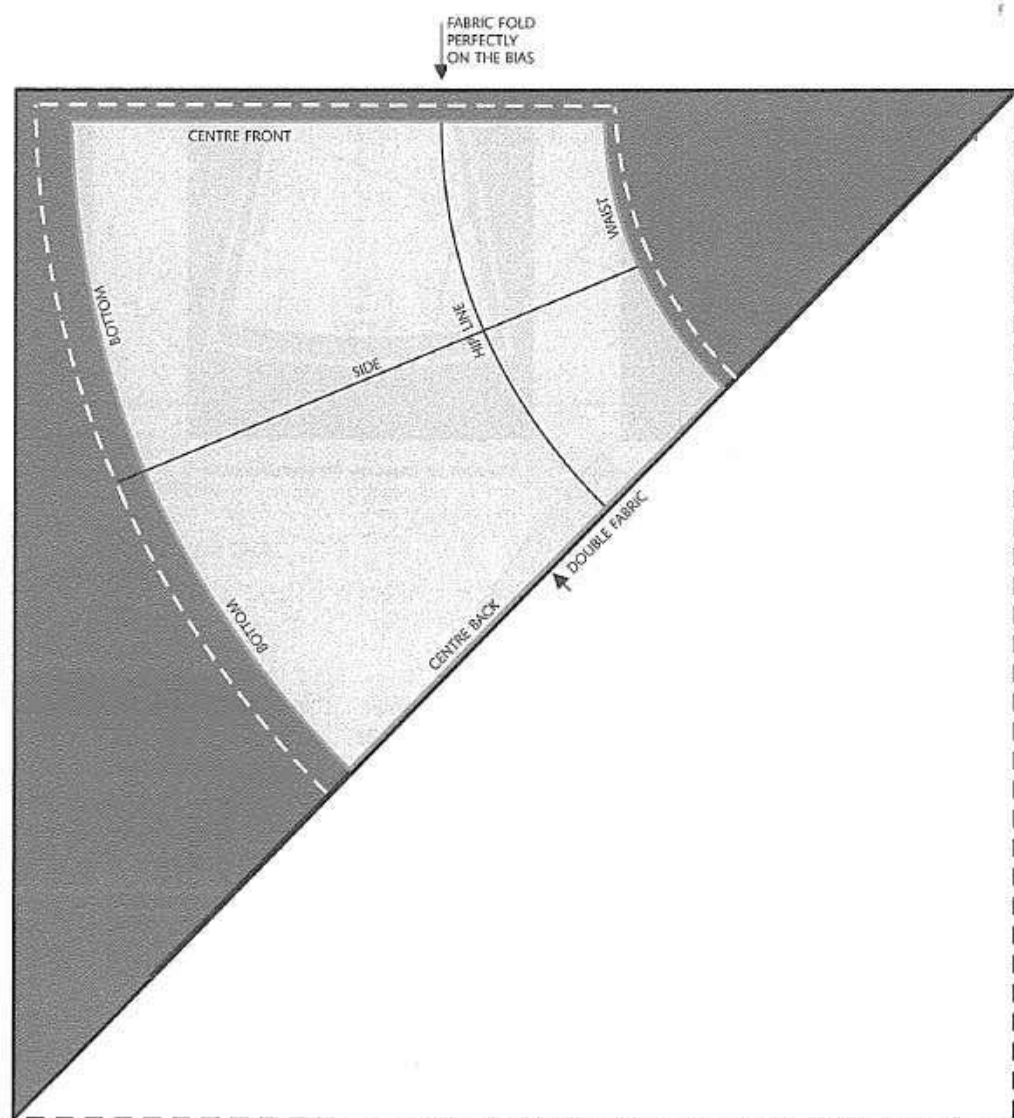
QUARTER-CIRCLE SKIRT WITH SINGLE SEAM



To make this skirt you have to fold the fabric at 45° , making it easy to position the pattern perfectly on the bias.

You place the centre front on the fold, if you want the seam in the back; you place the centre back on the fold if you want the seam in the centre front.

This kind of skirt can be made using solid colour fabrics, or at most with perfect checkered patterns, never with stripes or tartan plaids, the squares of which are slightly irregular.

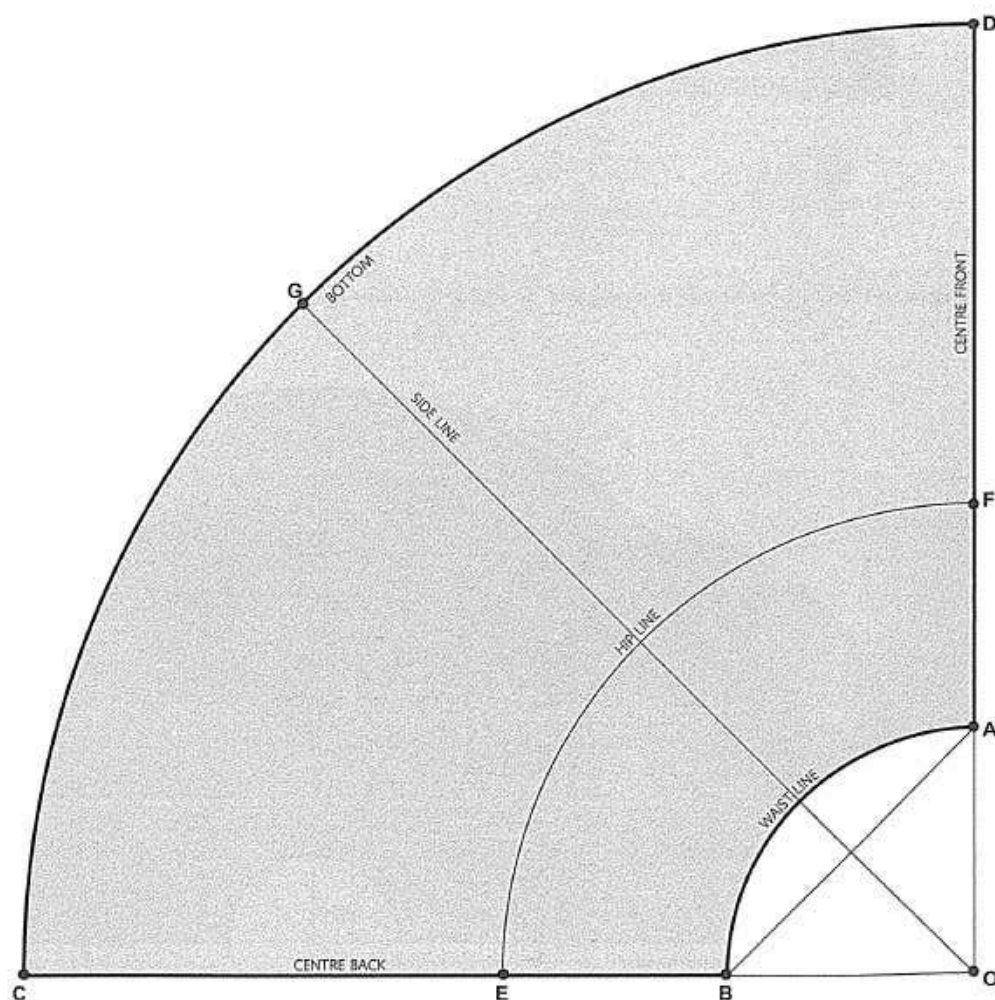
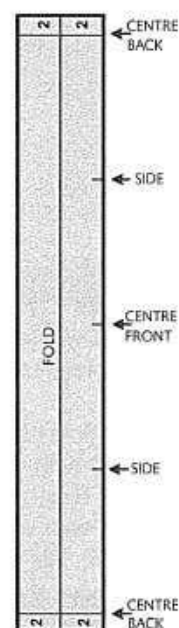


HALF-CIRCLE SKIRT

- Draw in the bottom right-hand corner a right angle D-O-C.
- From the vertex O trace the points A-B with a distance equal to the waist circumference divided by 3.14 and multiplied by 2 (e.g.: $72 : 2 = 36 : 3.14 = 11.5 \times 2 = 23$ cm)
- Draw an arc between A-B with vertex O (measuring half the waist circumference 36 cm). WAISTLINE.
- Draw an arc between D-C with vertex O, with A-D equal to the desired skirt length (65 cm). BOTTOM LINE.
- Draw an arc between E-F with vertex O, with A-F equal to the side height. HIP LINE.
- Divide in equal parts the arc C-D and trace the point G.
- Draw a straight line between O-G. SIDE LINE.
- Above the line A-D write CENTRE FRONT.
- Above the line B-C write CENTRE BACK.

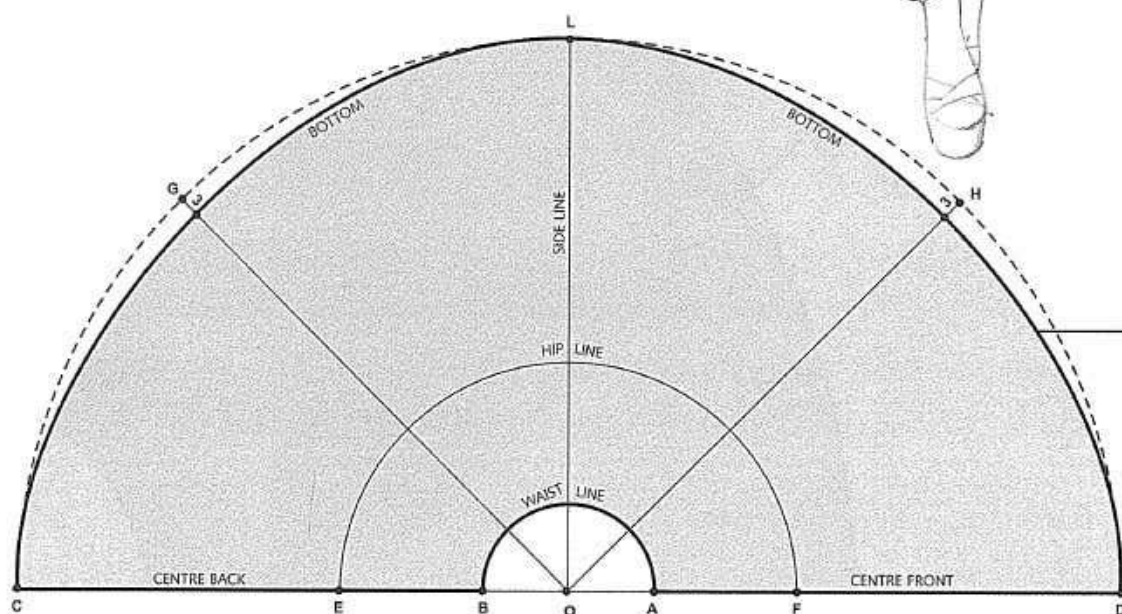
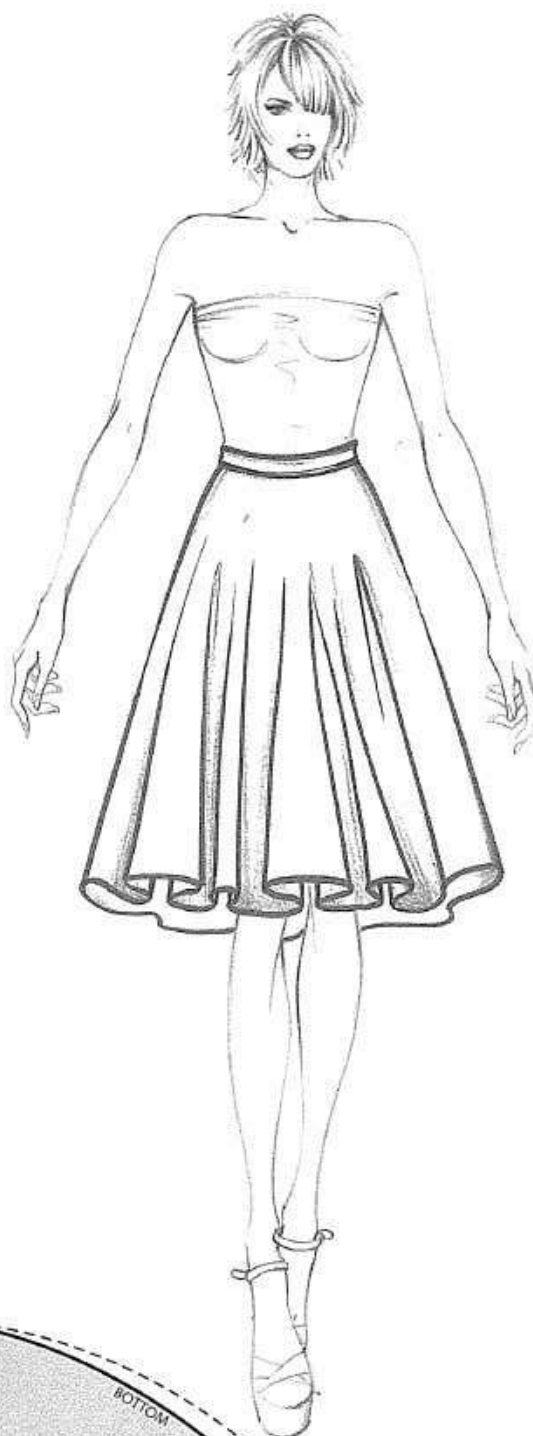


WAISTBAND

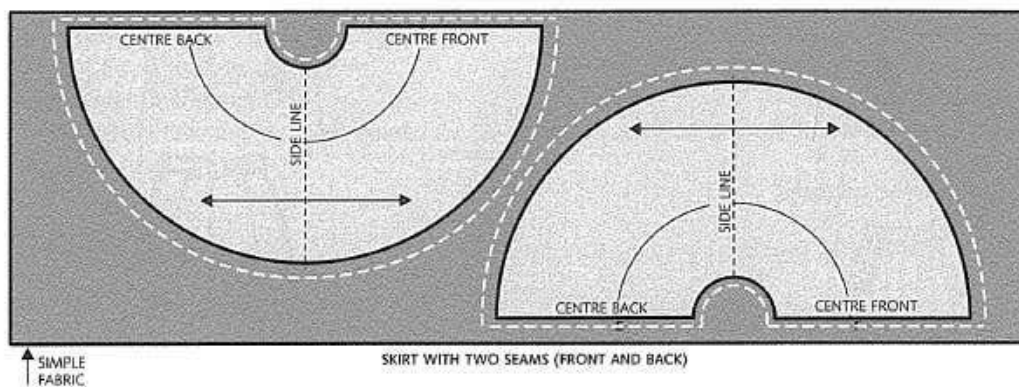


BASIC FULL-CIRCLE SKIRT BLOCK

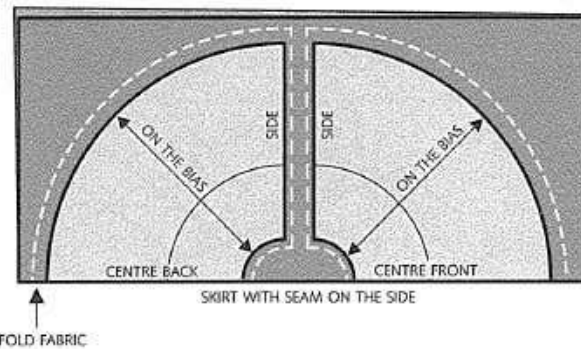
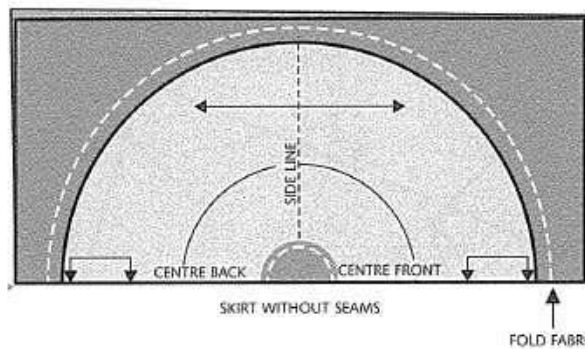
- Draw a straight line C-D.
- Trace the point O at centre of the straight line.
- Draw an arc between A-B with centre in O with the radius equal to the waist circumference divided by 3.14 minus 0.5 cm. WAISTLINE.
(e.g.: $36 : 3.14 = 11.5 - 0.5 = 11$ cm).
- Draw an arc between C-D with vertex O and with B-C equal to the desired skirt length (65 cm). BOTTOM LINE.
- Draw an arc between E-F with vertex O and with B-E equal to the side height (20 cm). HIP LINE.
- Write CENTRE FRONT above the line A-D.
- Write CENTRE BACK above the line B-C.
- Draw the perpendicular O-L. SIDE LINE.
- At G and H, shorten the line by 2-3 cm and reconstruct the arc. This is to avoid hemline drop.



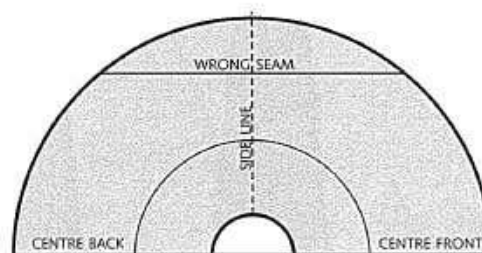
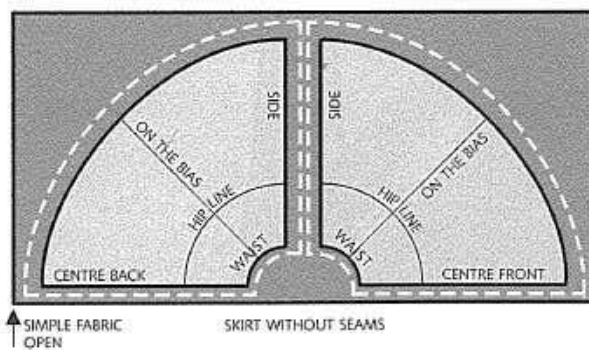
CIRCLE SKIRT PATTERN LAYOUT



This layout is done on simple (unfolded) fabric, since fabrics high enough to accommodate the pattern do not exist.



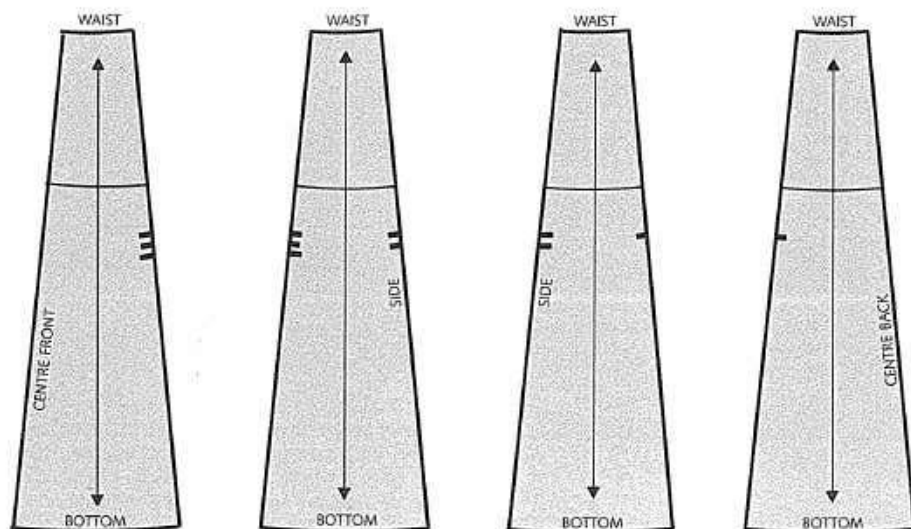
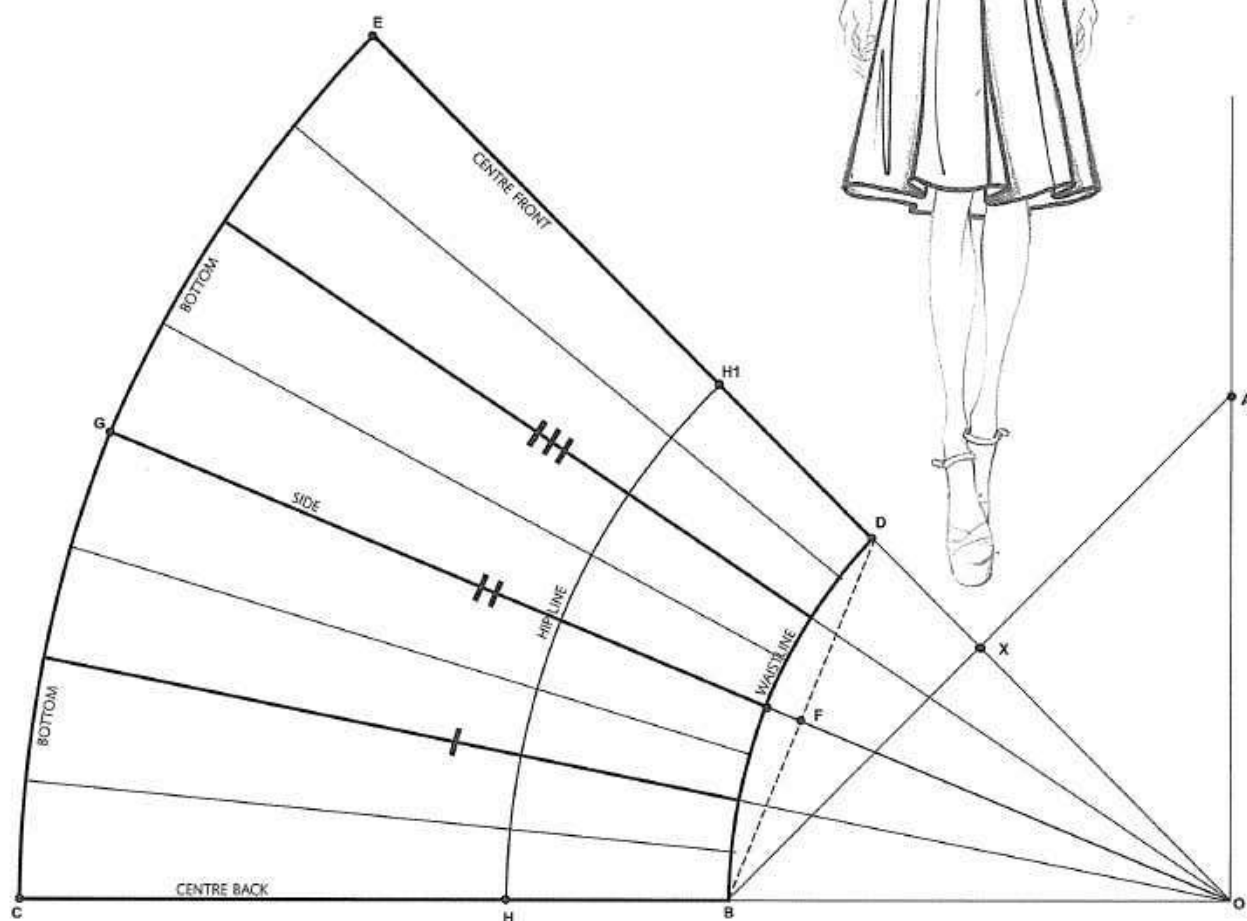
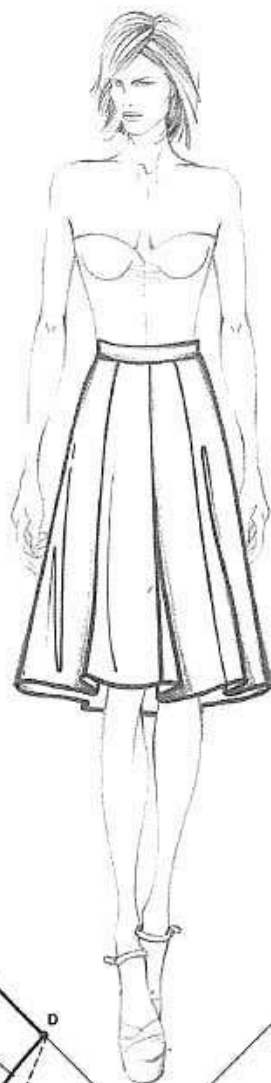
These two kinds of layout on double (folded) fabric can only be done with skirts having a maximum length of 55 cm. For longer skirts, panels have to be used.



Note: If an add-on is called for in the circle skirt, you must try to avoid the kind of seam shown in the figure, as it is unsightly. This solution can only be adopted with striped or plaid fabrics, where the motif can be used to camouflage the seam. It is always better to divide the skirt into gores.

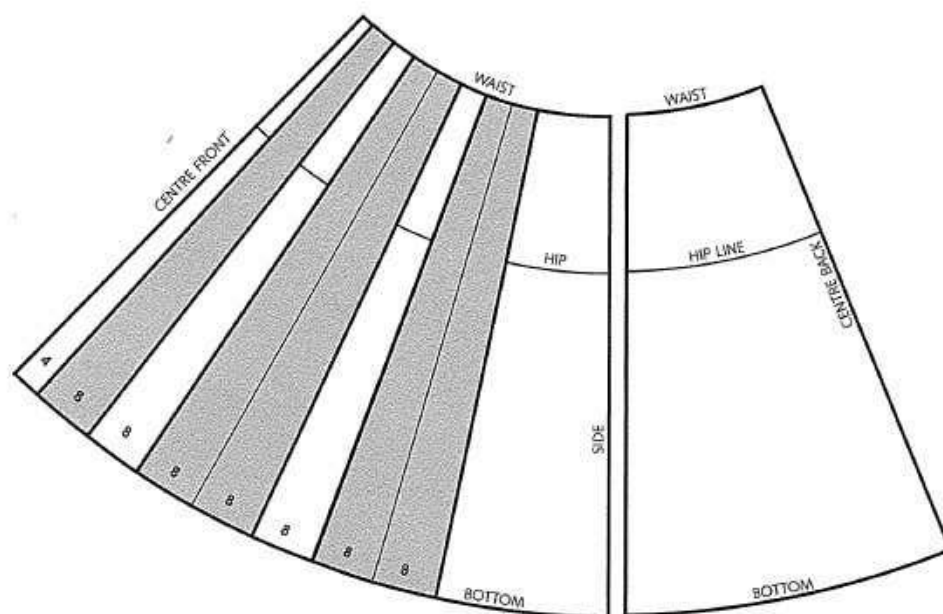
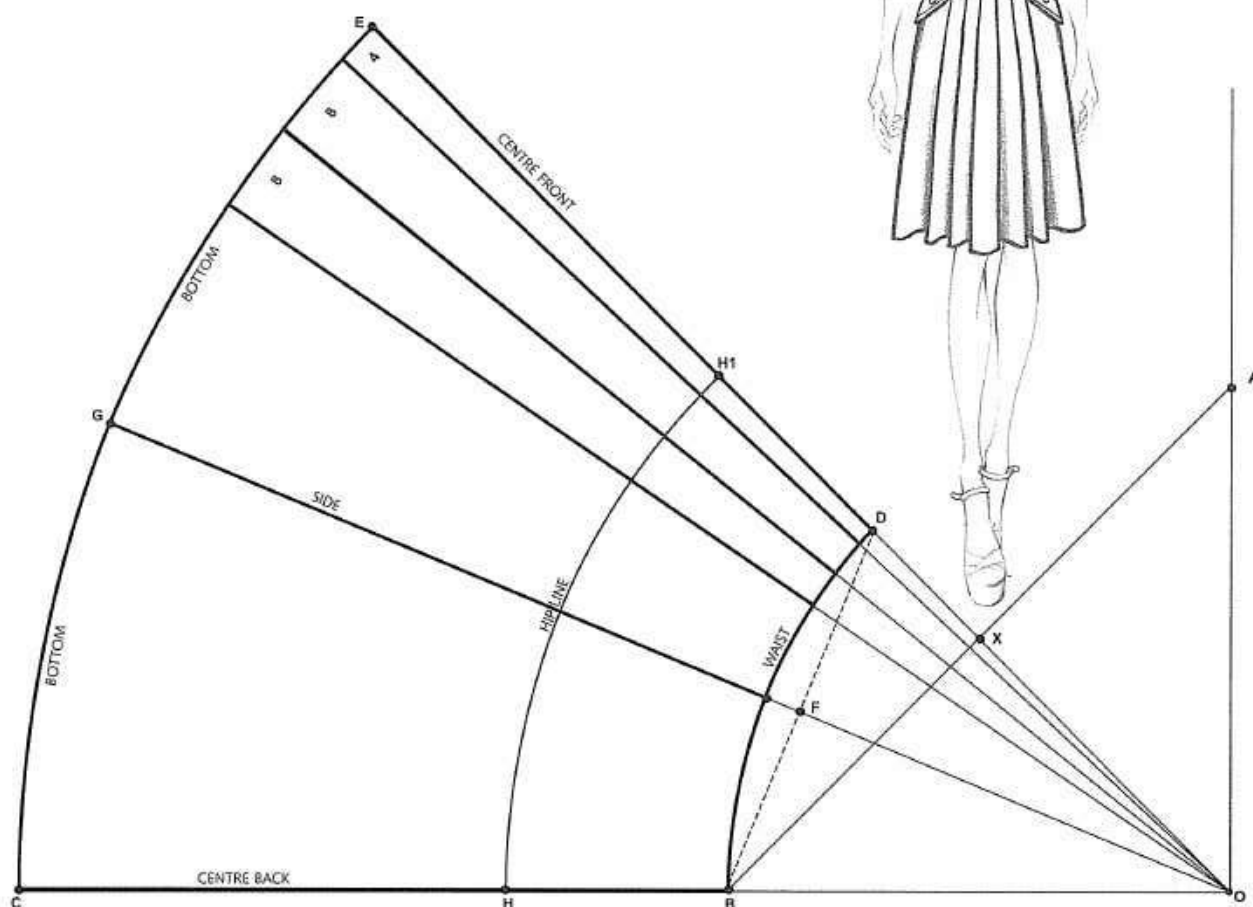
QUARTER-CIRCLE SKIRT WITH 8 PLEATS

- Make the basic quarter-circle skirt block (see above).
- Divide the skirt in 4 equal parts at the bottom, and join the points with the vertex O.
- Mark the centre of each panel for positioning on the straight of grain.
- Mark the gores and make the notching.



QUARTER-CIRCLE SKIRT WITH 6 PLEATS IN FRONT

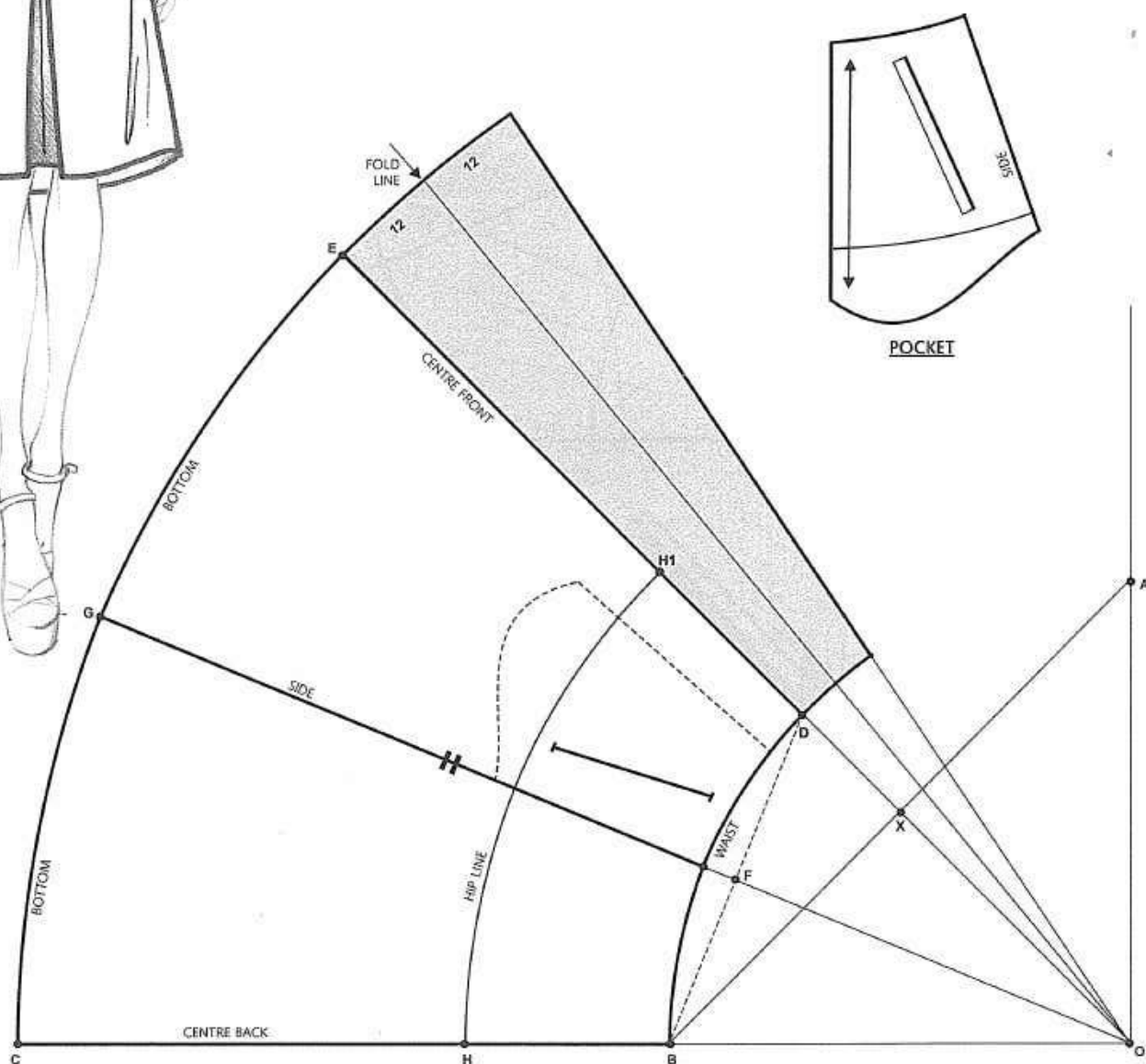
- Make the basic quarter-circle skirt block (see above).
- Divide the skirt in 4 equal parts at the bottom, and join the points with the vertex O.
- Make the inverted pleats taking O as pivot point.
- Adjust accordingly and mark the parts.



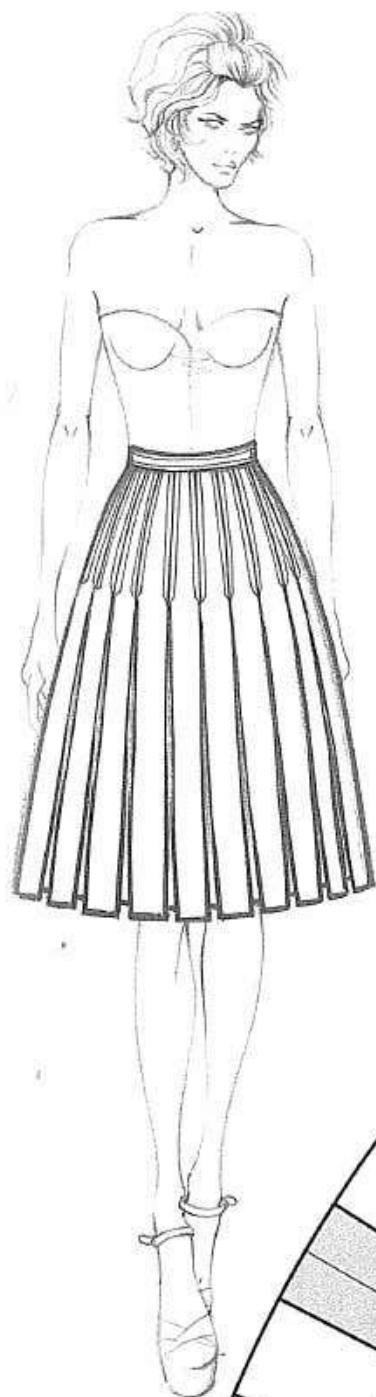
QUARTER-CIRCLE SKIRT WITH INVERTED PLEAT



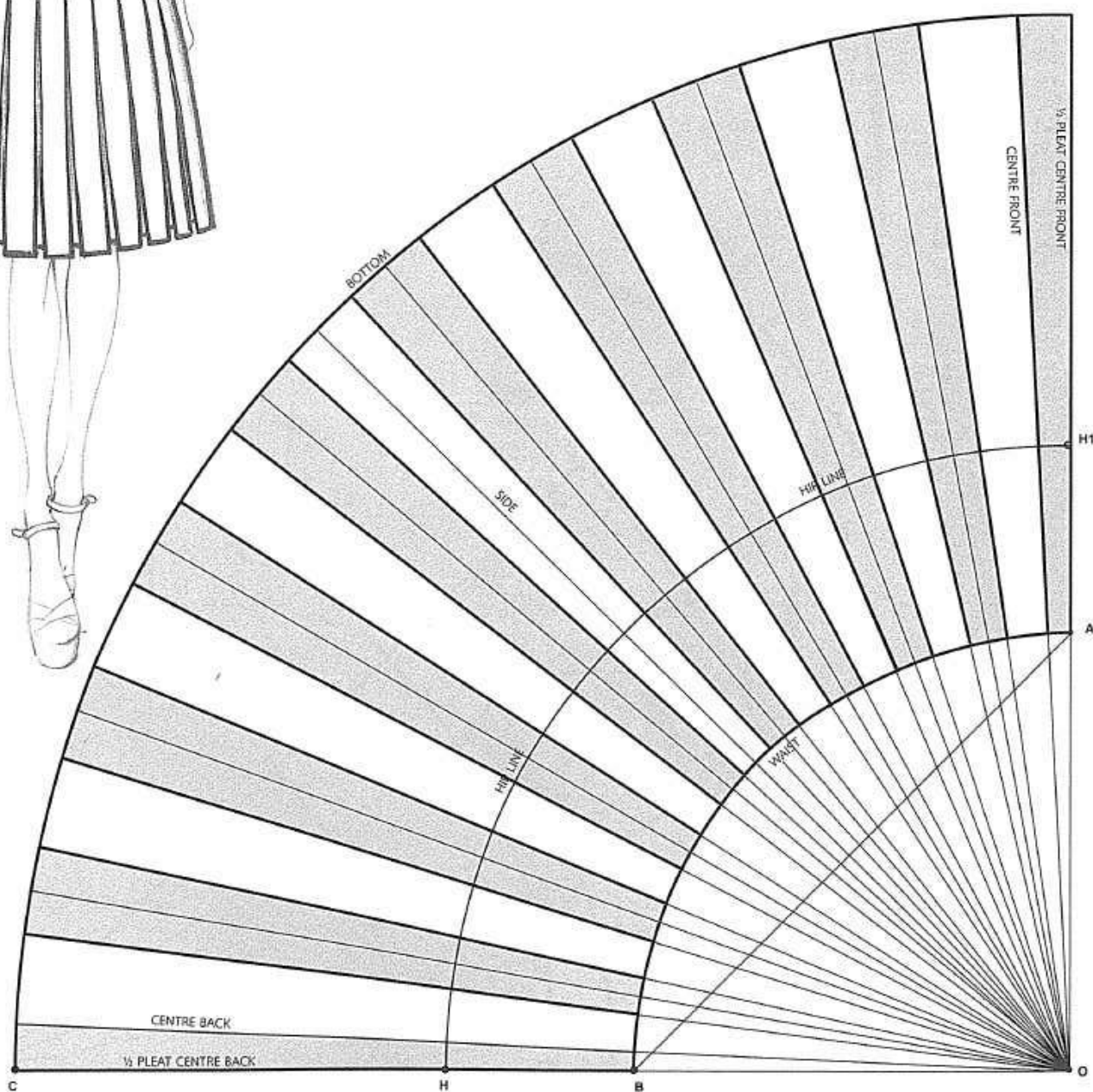
- Make the basic quarter-circle skirt block (see above).
- At the bottom of the skirt, extend the arc after the centre front by 24 cm (or the desired distance), divide in half and join the points to the vertex O.
- Mark the points and do the notching.



QUARTER-CIRCLE SKIRT WITH FLARED BOX PLEATS



- Make the basic quarter-circle skirt block (see above).
- Divide the skirt in equal parts, as many as the number of pleats to make, taking O as pivot point.
- Maintaining the same vertex, create the box pleats with same measurements, inside and out, starting with half a box pleat at the centre front and ending with half a box pleat at the centre back, for the seam.
- Mark the points and do the notching.



FLOUNCED SKIRT

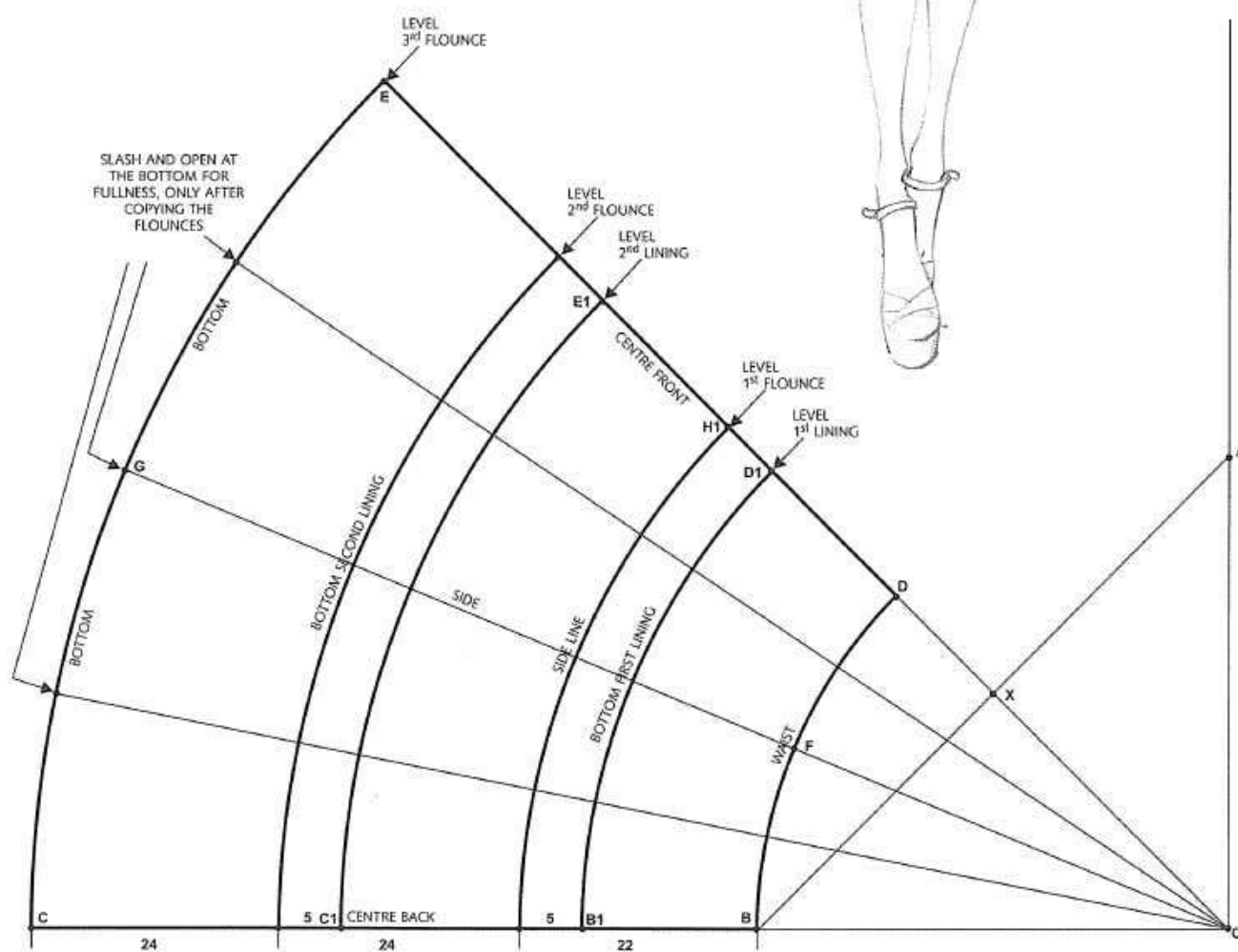
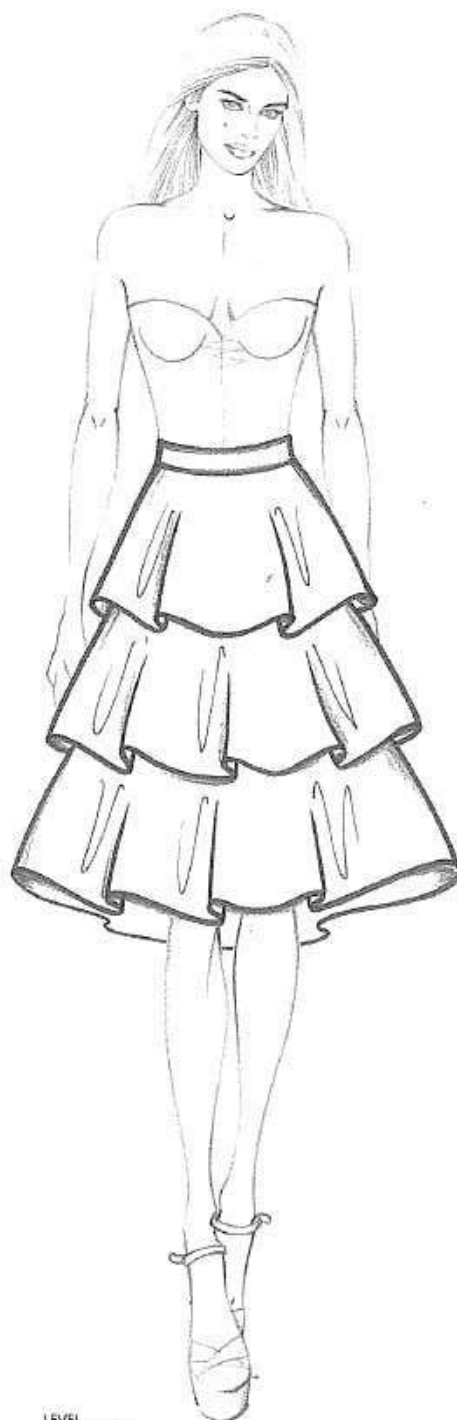
- Make the basic quarter-circle skirt block (see above).

Flounces

- Draw the 1st flounce at the hip level with arc.
- Draw the 2nd flounce as desired distance (24 cm).
- Draw the 3rd flounce at bottom level.

Lining

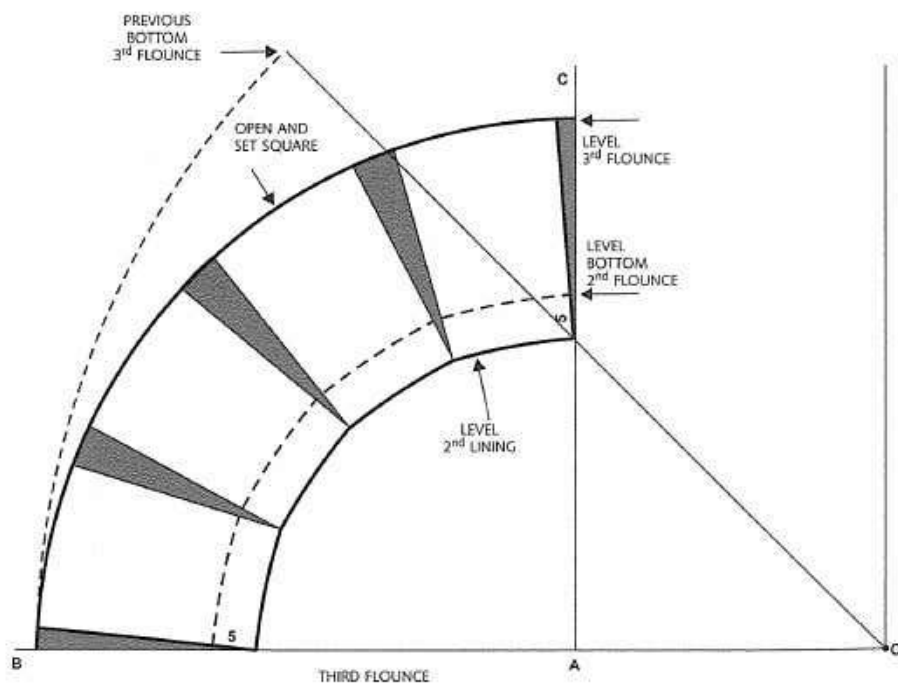
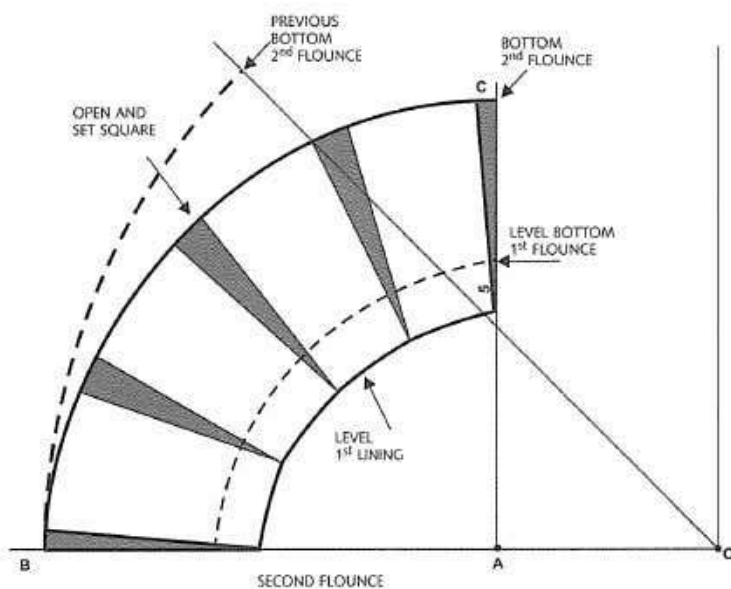
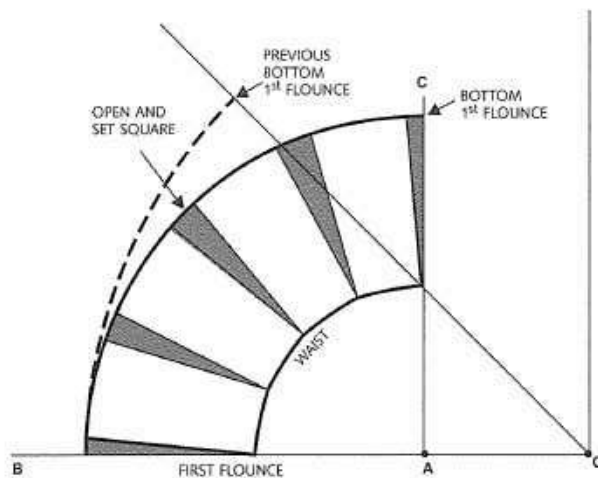
- Draw arc B1-D1 (bottom first lining), 5 cm from 1st flounce.
- Draw arc C1-E1 (bottom second lining), 5 cm from 2nd flounce.



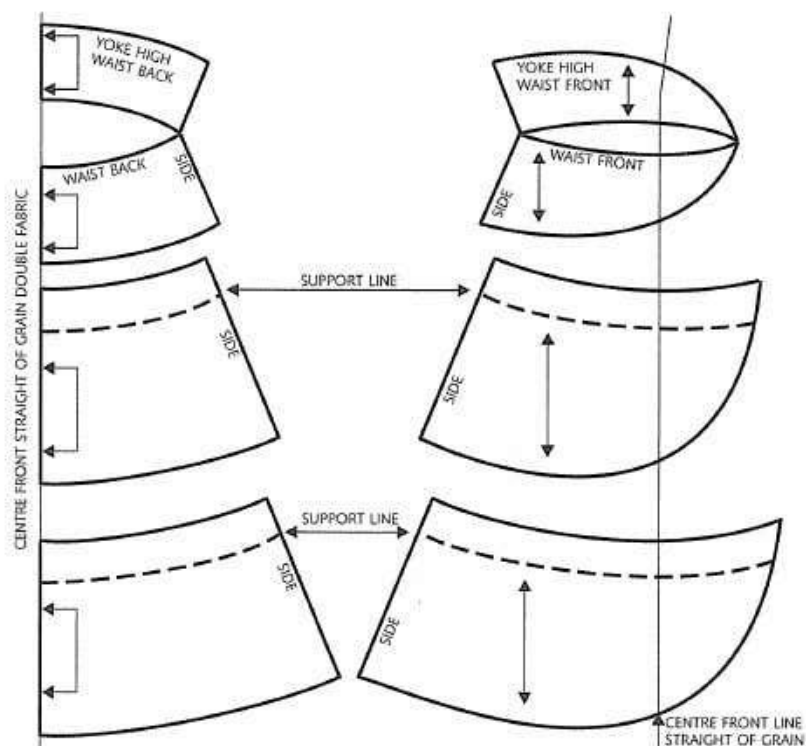
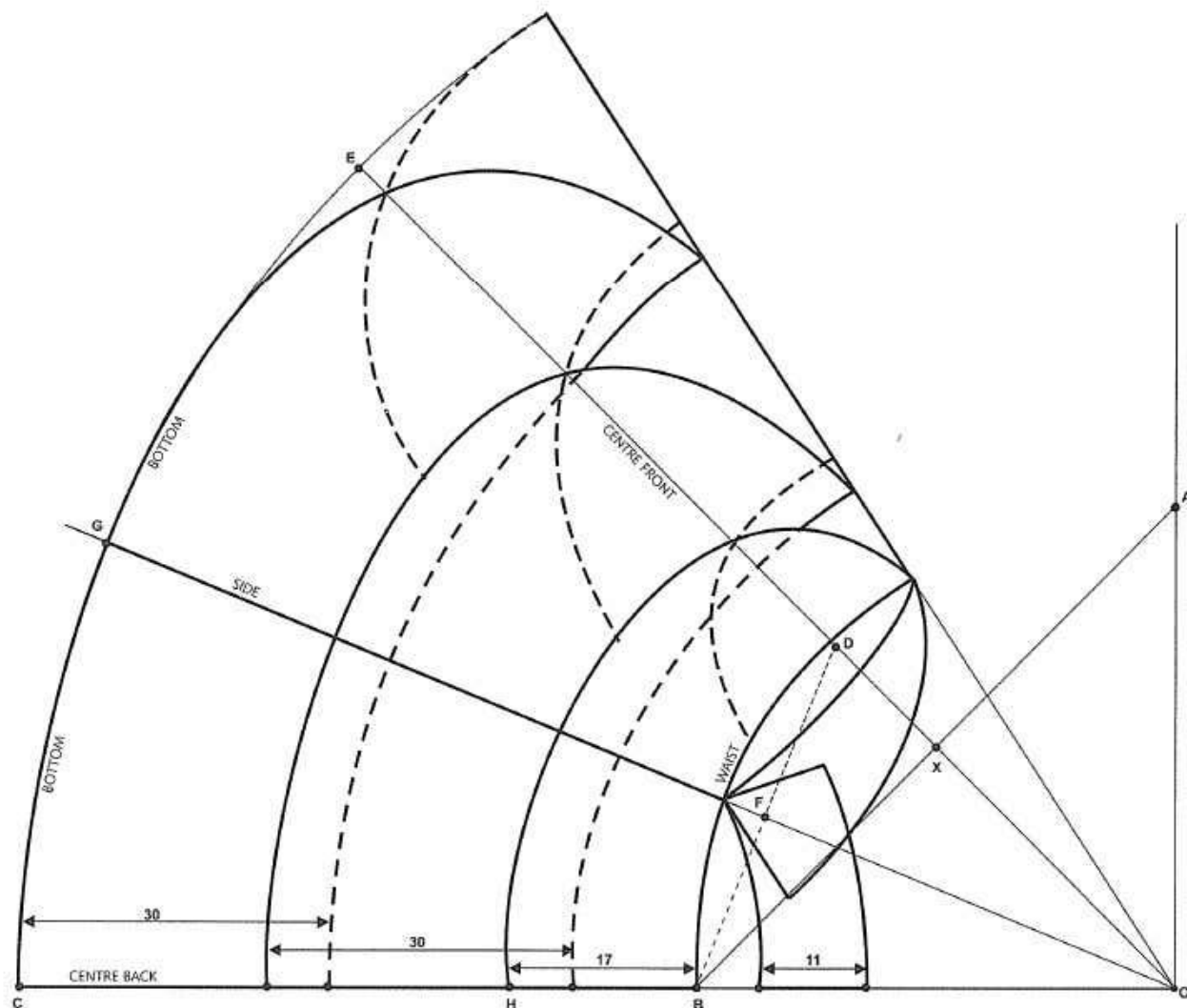
ADAPTATION OF SKIRT WITH GODET FLOUNCES

Transformation of individual flounces.

- After copying the flounce section from the pattern block, make the three slashes to the edge of the waist, without cutting through.
- Draw a right angle A-B-C onto another sheet of paper.
- Paste the pattern onto this sheet, spreading to the desired fullness.

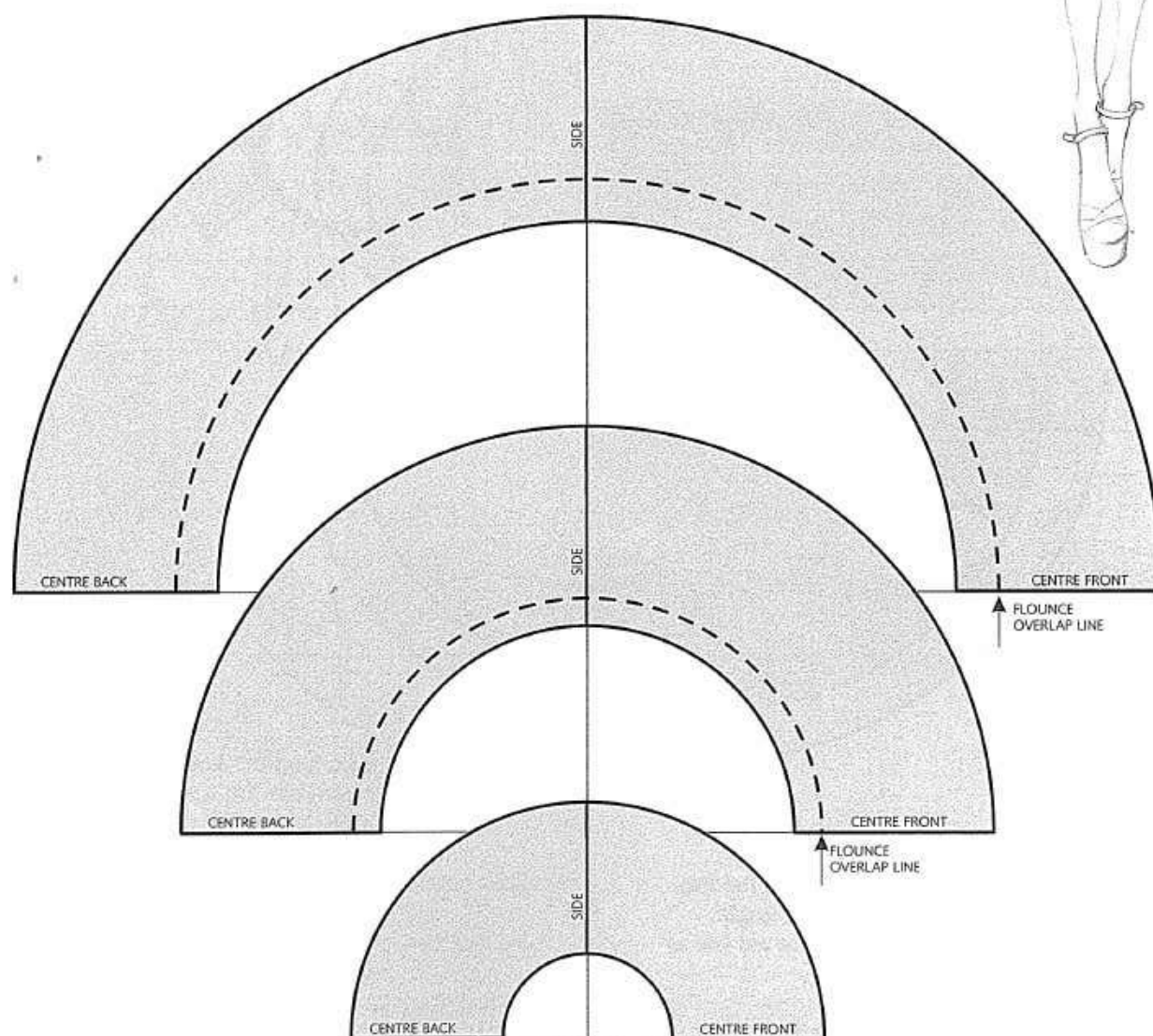


SKIRT WITH FANCY TIERED FLOUNCES

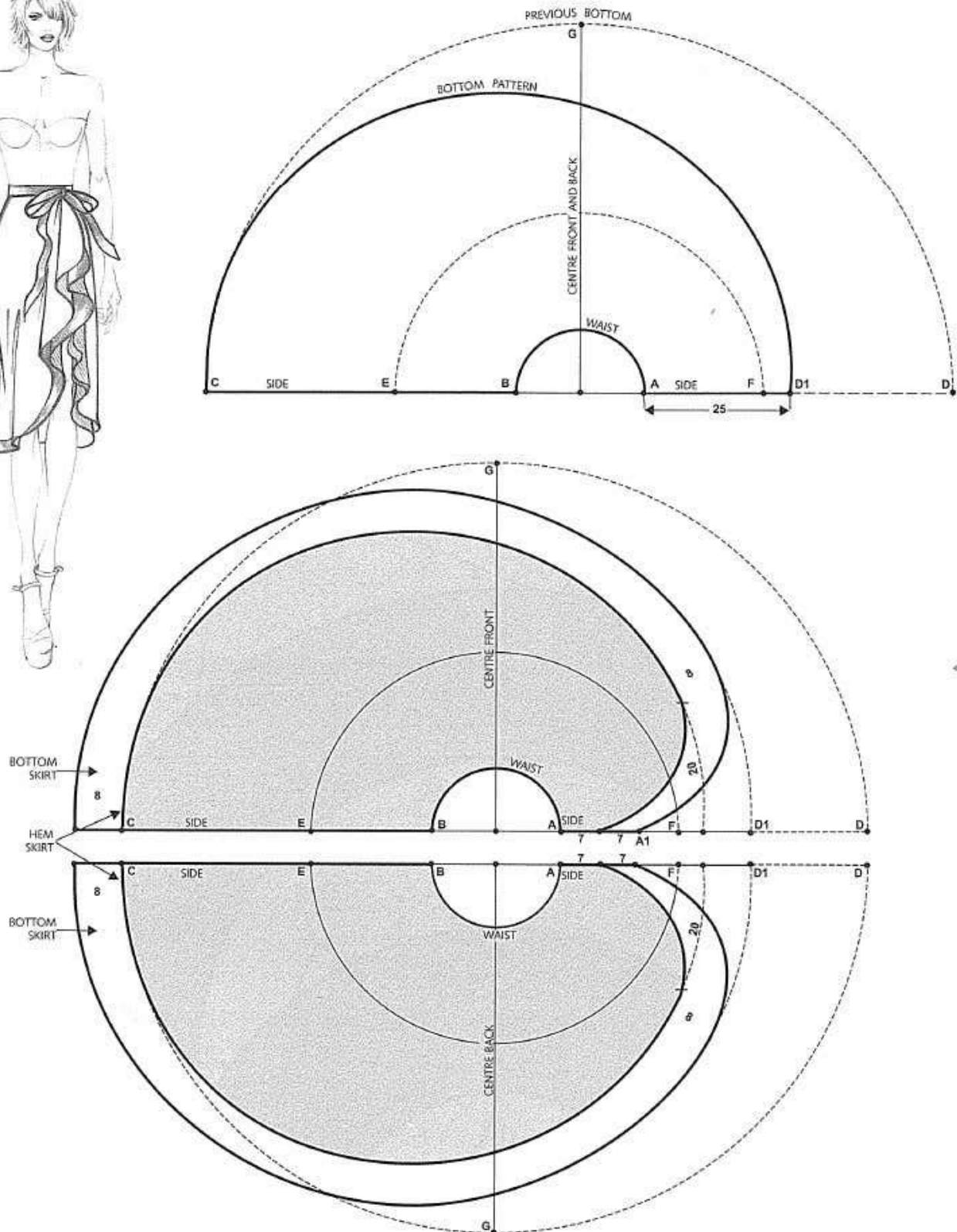


TIERED CIRCLE SKIRT

This type of skirt is obtained by dividing the circle skirt pattern block in as many parts as the desired number of tiers.
For each tier, add 5 cm for the overlap to the next tier.
You may want to mount the tiers on a lining made from the basic $\frac{1}{4}$ -circle skirt block.

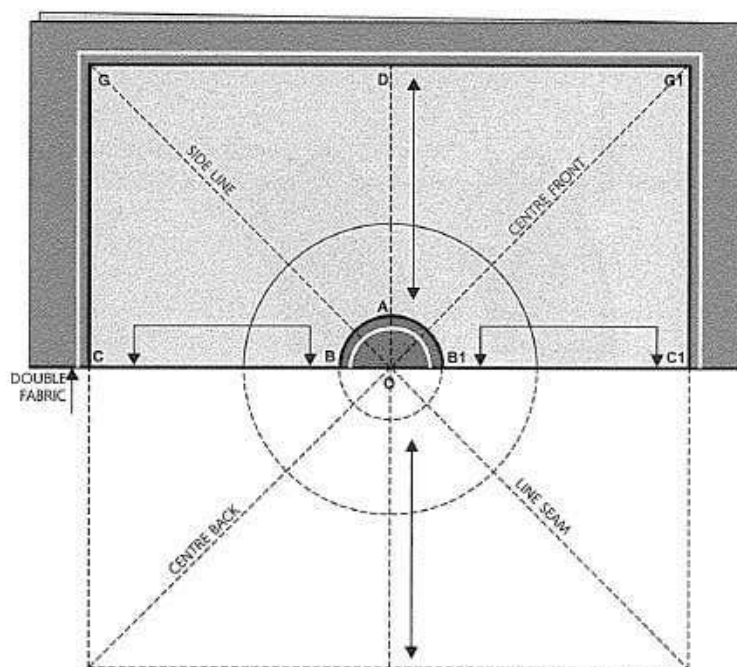
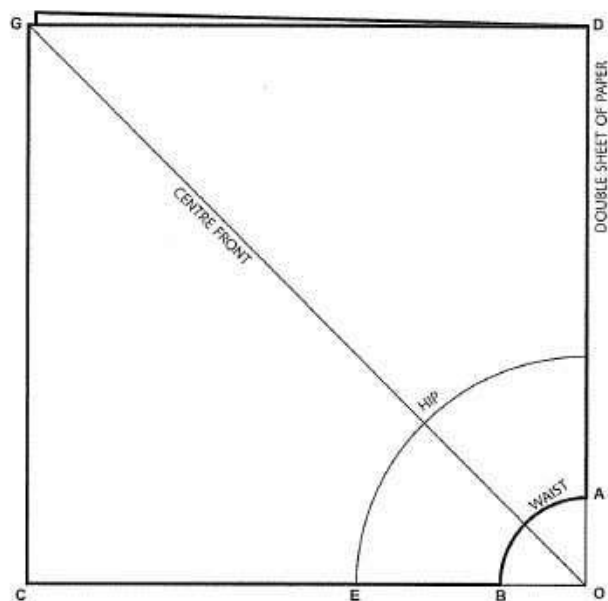
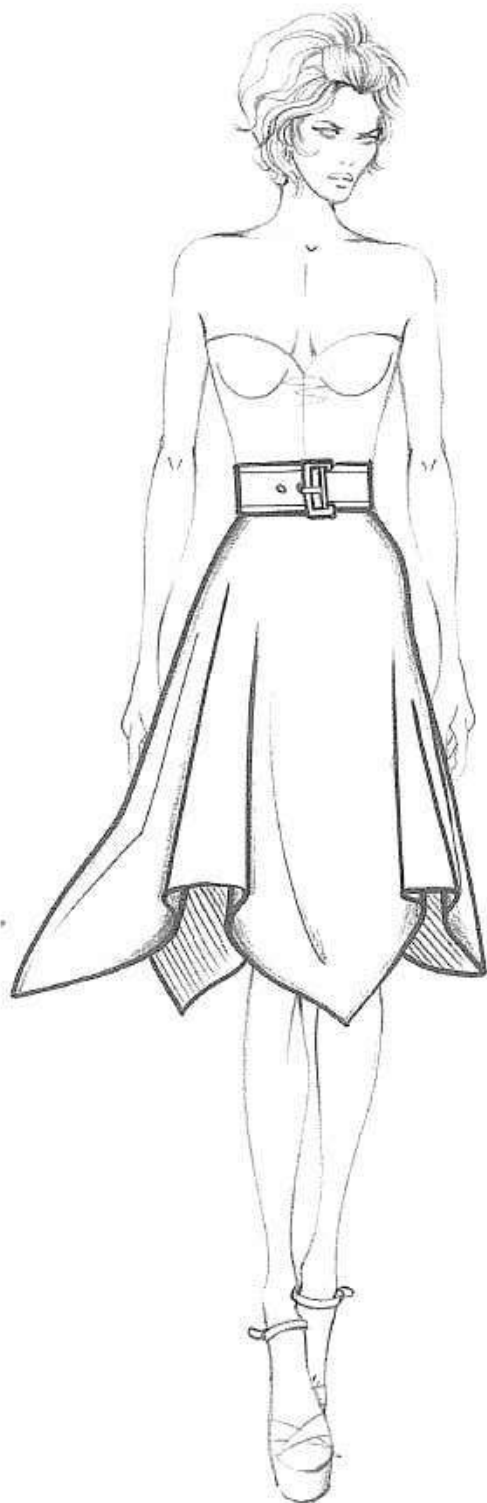


A fashion sketch of a woman with short, wavy hair and bangs. She is wearing a strapless, fitted bodice with a small keyhole cutout at the center. The skirt is long and flowing, featuring a large bow at the waist and a ruffled hem. She is also wearing high-heeled sandals with thin straps. The sketch is rendered in a simple, elegant line style.



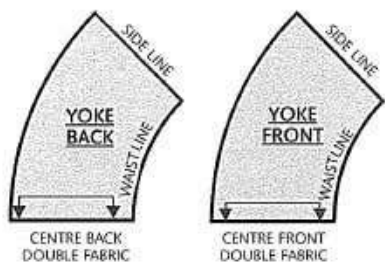
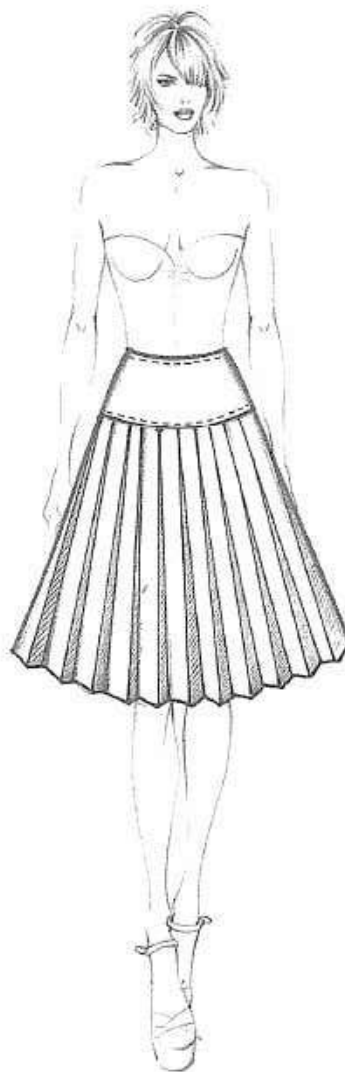
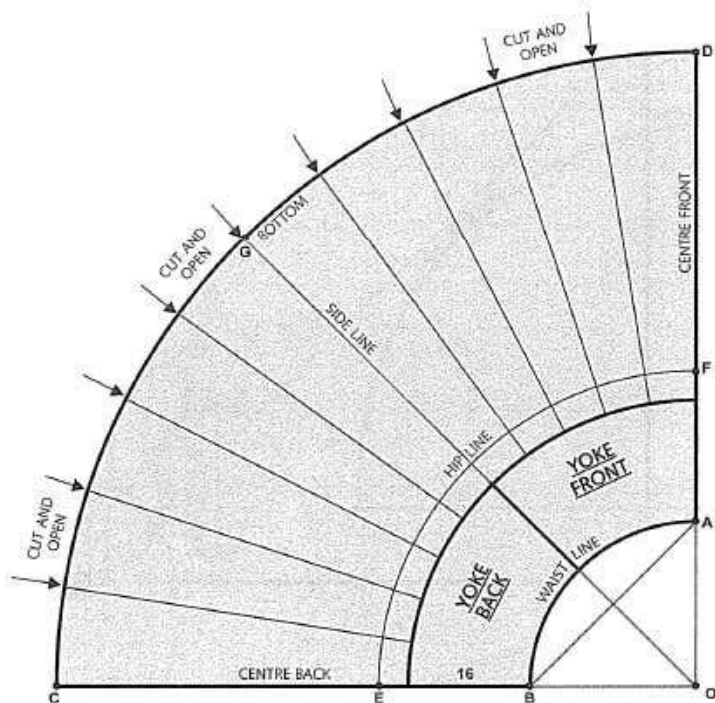
- Note:** This skirt can be made seamlessly, if the fabric length permits.

"SQUARE" CIRCLE SKIRT

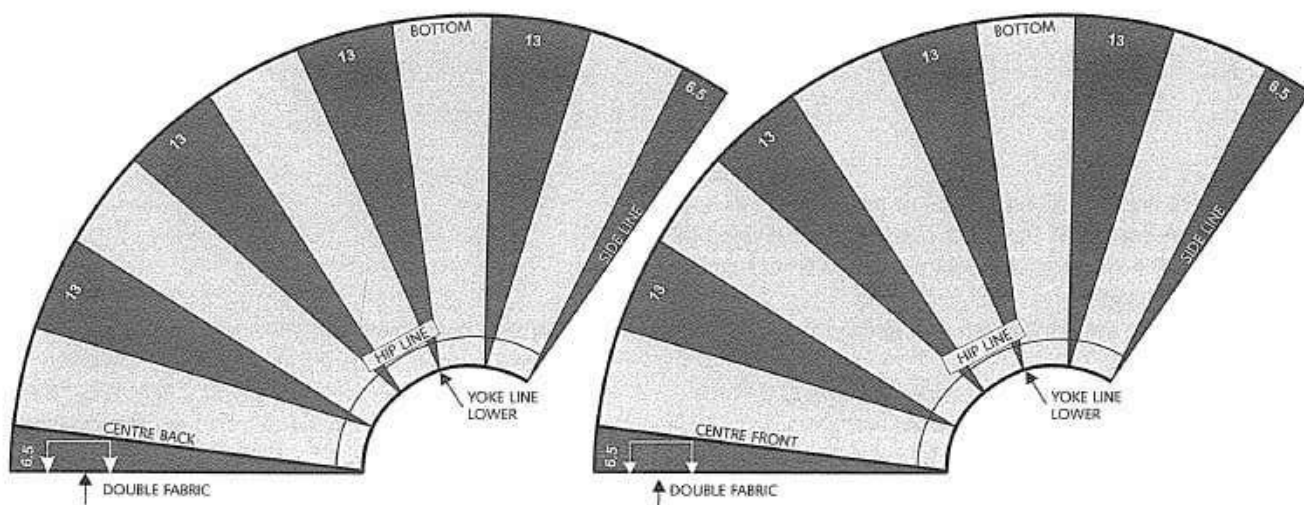


- Draw a right angle DOC on a sheet of paper folded in half.
- O-B and O-A equal half the waist circumference divided by 3.14, minus 0.5 cm (e.g.: $36 : 3.14 = 11.5 - 0.5 = 11$ cm).
- B-E is the hip height.
- B-C and A-D are the skirt length (the desired length of the shortest part).
- Open the pattern and join O-G (side line) and O-G1 (centre front line) with a broken line.
- Position the pattern on the fabric folded in half, as shown in the figure.

YOKED SUNBURST SKIRT



- Construct the half-circle skirt pattern block
- Divide the bottom line in equal parts, corresponding to the number of pleats desired.
- Draw the yoke line at the desired height.
- Draw the lines converging on the O point, but starting only from the yoke line.
- Cut the yoke and divide the front and back.
- Slash along the lines drawn, and open by the same distance as the panels (13 cm).
- From the centre front and the centre back halve the distance (6.5 cm).



CORRECTING FIGURE DEFECTS FOR PENCIL SKIRTS

The construction of the pattern blocks is made using measurements for a standard, size 42 subject, in accordance with the leading apparel manufacturers.

With made-to-measure apparel, the shape and even the measurements can be very different.

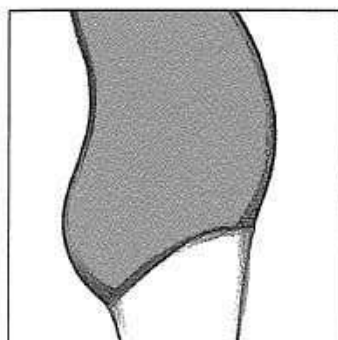
In these cases, when you take the measurements, you must be very careful to take note of any postural or figure defects, in addition to the measurements. These serve to modify and correct the basic pattern block, adapting it to the individual figure.

Study of the correction of defects and of abnormal shapes

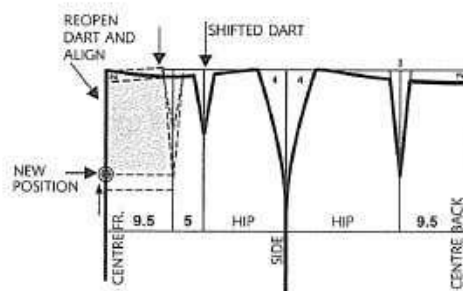
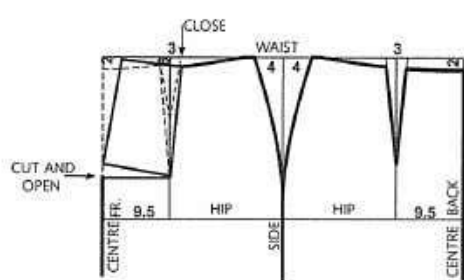
that can be found in the human population has been quite extensive, and would require an entire volume in itself to explore it thoroughly.

Here we will analyze the most commonly found defects, combining theoretical explanations with practical applications with reference to the various problems that pattern-makers must solve in executing a proper made-to-measure garment.

In this respect, it is always wise to remember that the primary task of a good pattern-maker and dressmaker is to beautify and enhance the wearer, camouflaging and minimizing the defects and highlighting the good qualities and personality.



PROMINENT BELLY

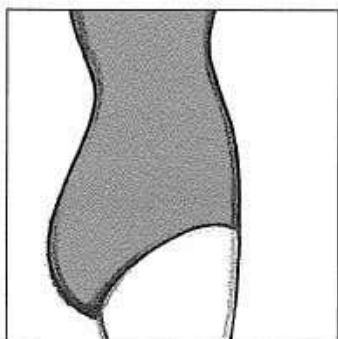


For a prominent belly, you must extend the front waistline in accordance with the measurements so that the skirt falls correctly.

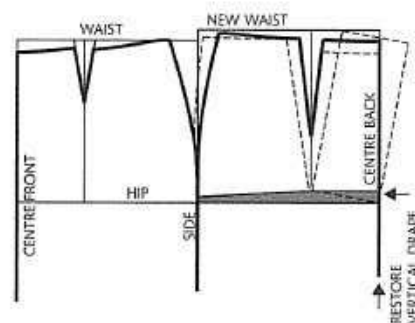
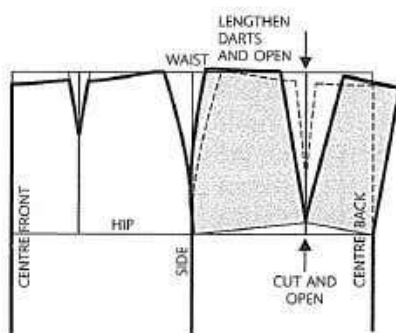
- Close the front waist dart, slashing at the widest point of

the centre front.

- Taking this as your reference point, restore the vertical drape of the centre front.
- Shift the waist dart by a few centimetres.



PROMINENT BOTTOM



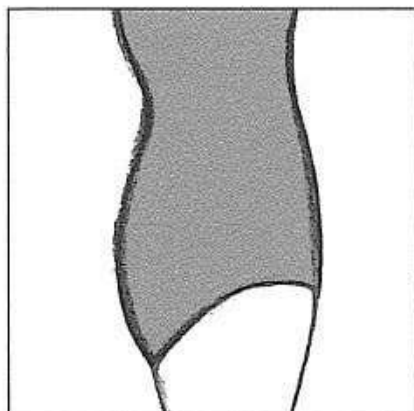
For subjects with this figure, you must extend the back portion as needed, based on the excess measurements.

- Cut along the back dart line and along the hip line and open

up both in back and to the side, as the measurements require.

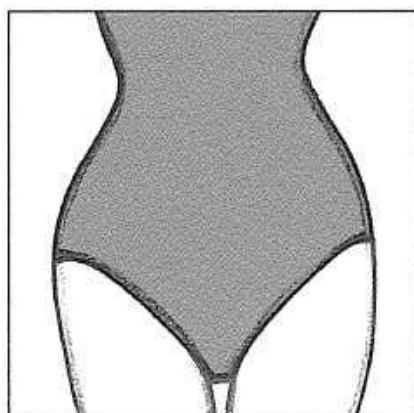
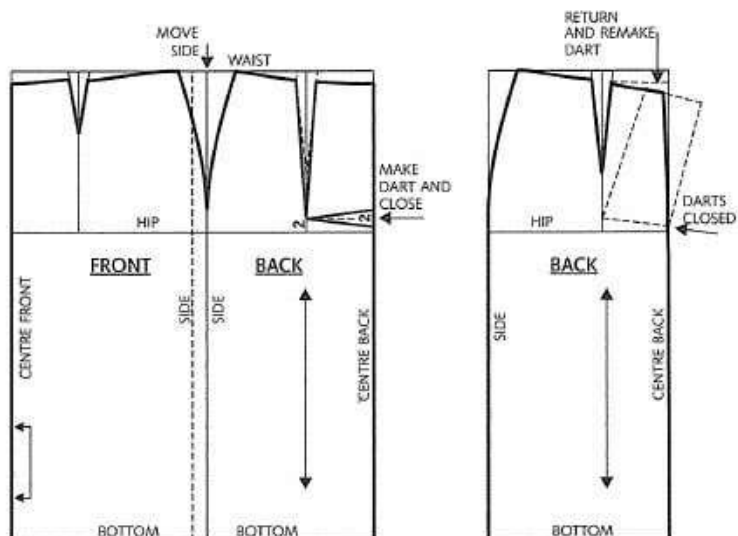
- Restore the straight of grain of the centre back, the curve of the sides and the dart, correcting the run.

CORRECTING FIGURE DEFECTS FOR PENCIL SKIRTS



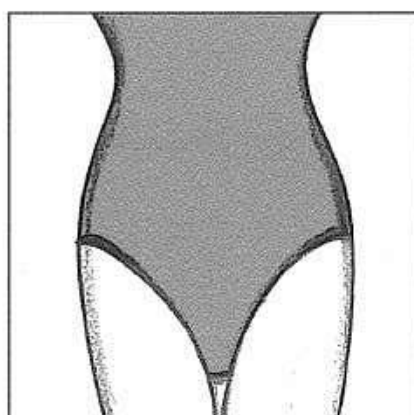
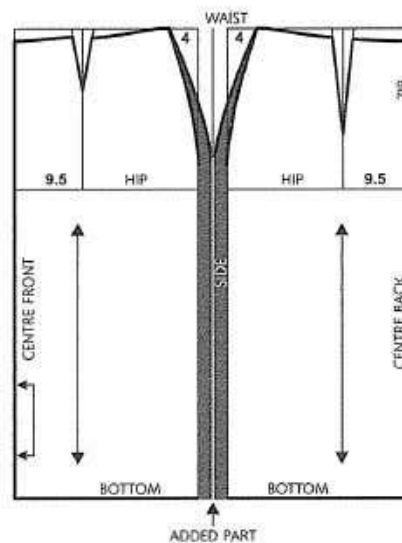
FLAT BOTTOM

- Shift the side seam back by 2 cm.
- Create a dart at the back hip line of the desired size and close it.
- Restore the centre back and connect the lines.



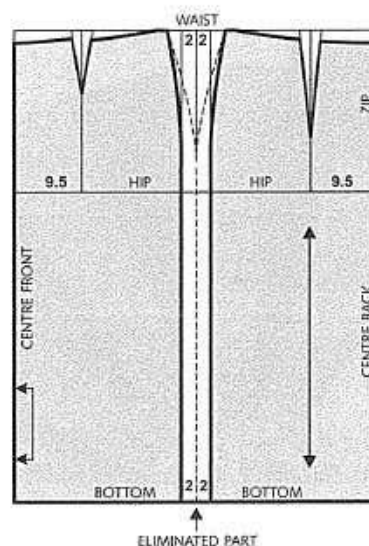
BOTTOM WIDE

- Widen the hip line as needed, both front and back.
- Adjust the new shape of the hip line accordingly.



BOTTOM NARROW

- Reduce the hip line as needed, both front and back.
- Adjust the new shape of the hip line accordingly.

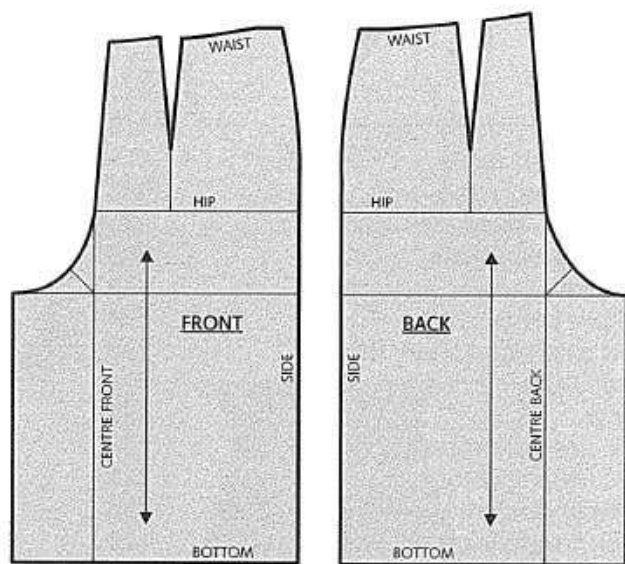
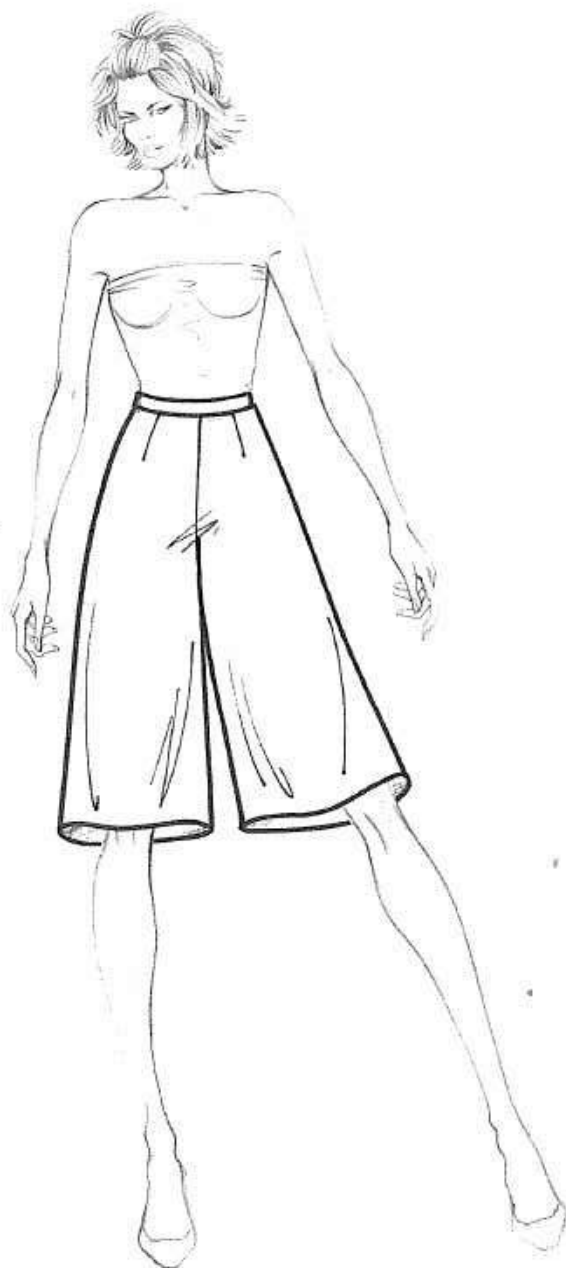
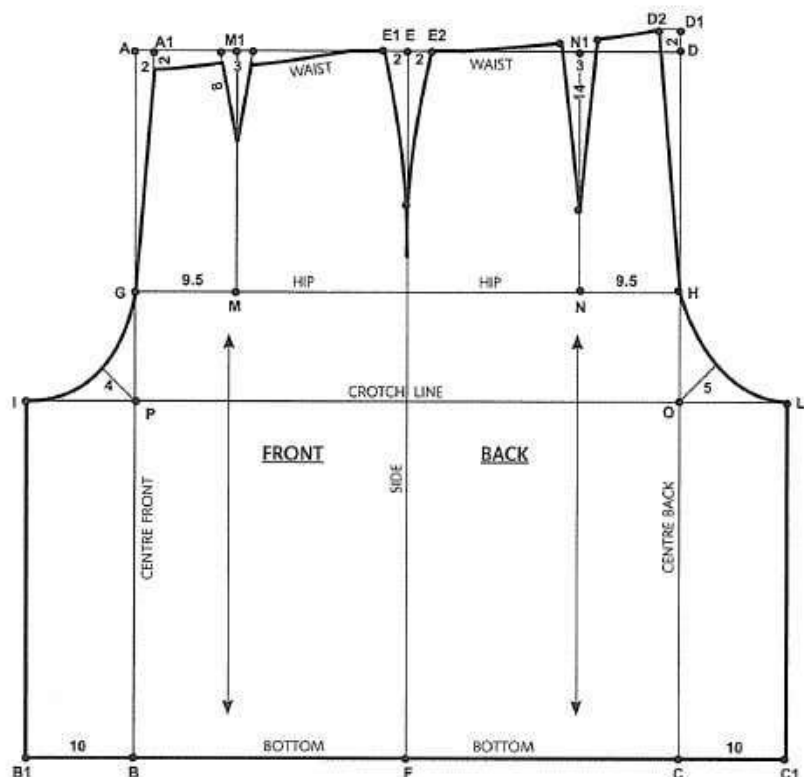


CULOTTES, TROUSERS AND OVERALLS

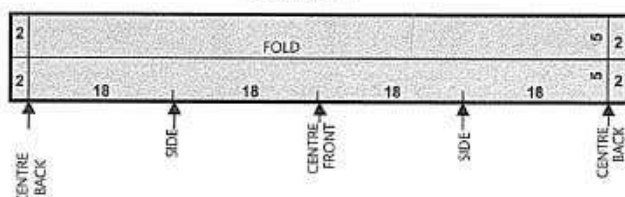


Basic culottes block	98	Flared pants	118
Basic block with longer body rise in back .99		Low-waisted pants	119
Basic block with deeper body rise in back .99		High-waisted pants	120
A-line culottes	100	Pants with elasticized waist	121
Flared culottes	101	Flared harem pants	122
Culottes with 2 pleats	102	Plus fours	123
1/4-circle skirt culottes	103	Jodhpur pants	124
Wrap-around culottes	104	Short pants and short shorts	125
Culottes with soft gathers	105	Bermudas	126
Half-circle palazzo pants	106	Turkish	127
Trousers	107	Basic drawstring pants block	128
Pattern terminology	108	Basic leggings block	129
Pant length	109	Correcting figure problems for pants . . .	130
Trouser measurements	110	When trousers are off grain	132
Basic trousers with pleats	111	The pockets	133
Basic trousers without pleats	112	Applied pocket with flap or tab	134
Detail of classic trousers	113	Pouch pocket	135
Seam allowances	114	Cargo or pleated pocket	135
Basic jeans	115	Shaped pockets	136
Baggy pants	116	Sewn-in pockets	137
Maternity pants	117	Welt pockets	138

BASIC CULOTTES BLOCK

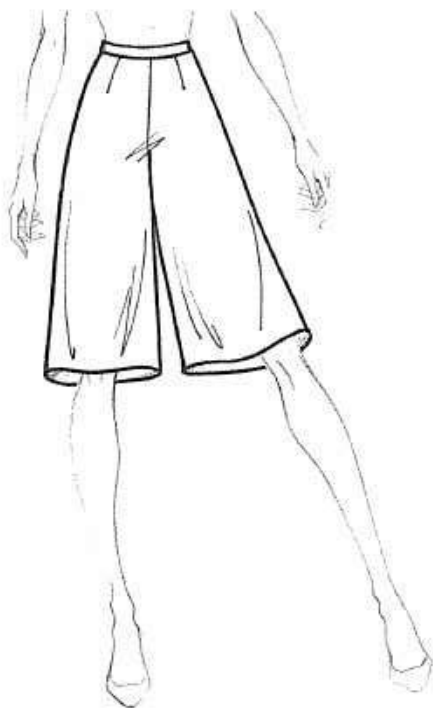


WAISTBAND

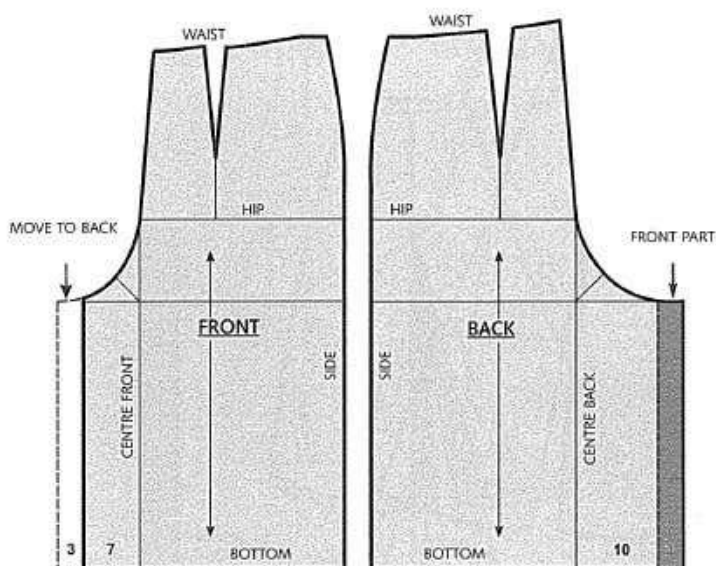


- Draw the basic pencil skirt block taking the hip circumference for the width and applying the desired length.
- To find the Body rise O P, go down the side seam GH for 1/10 of the hip circumference (e.g.: 100 cm : 10 = 10 cm).
- Extend the body rise on both the back half (OL) and the front half (PI) by 1/10 of the hip circumference and from these points draw two vertical lines toward the hemline.
- The vertices I and L of the Body rise join G and H of the front and back halves by means of two curved lines as illustrated in the figure.
- For where the waist tightens, in addition to the darts and the inward curve at the hips, take in about 2 cm on the front and back halves.
- The dip of the front waistline (A1) is diminished by about 2 cm, as in the basic pencil skirt, while it is increased by 2 cm or more for the back waistline (D2), as needed, as shown in the diagram.

BASIC BLOCK WITH LONGER BODY RISE IN BACK

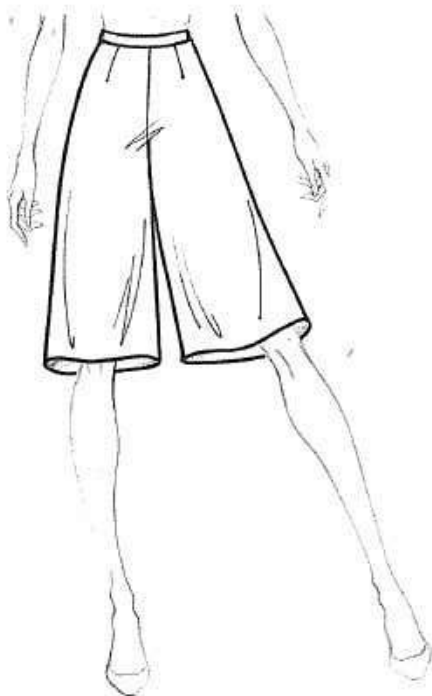


To get greater ease in the body rise, move a piece of the pattern front to the back, depending on the subject's needs (in this case, 3 cm).

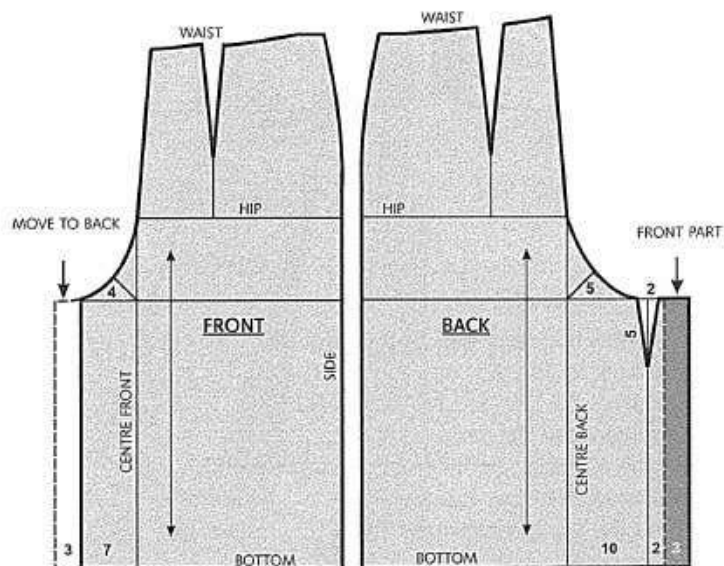


BASIC BLOCK WITH DEEPER BODY RISE IN BACK

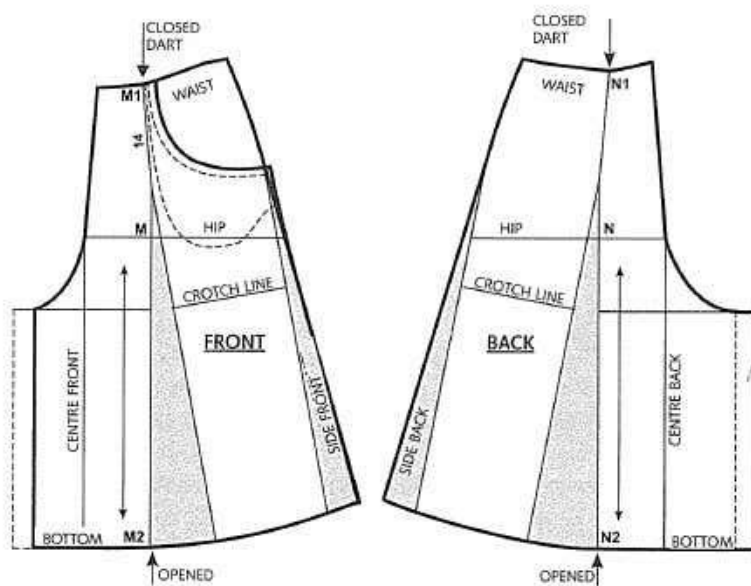
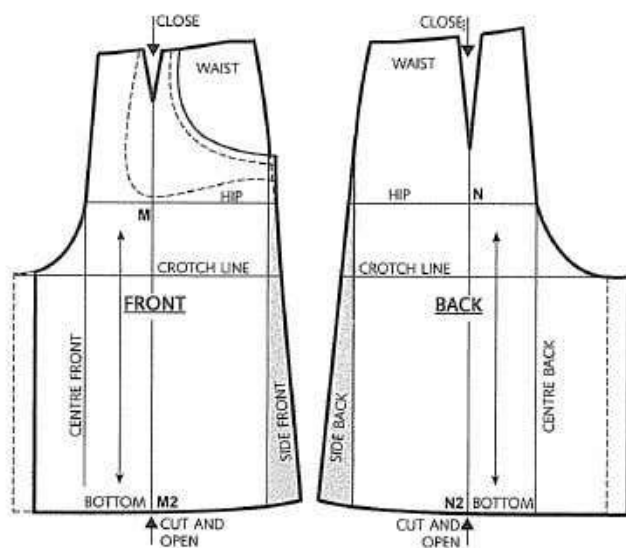
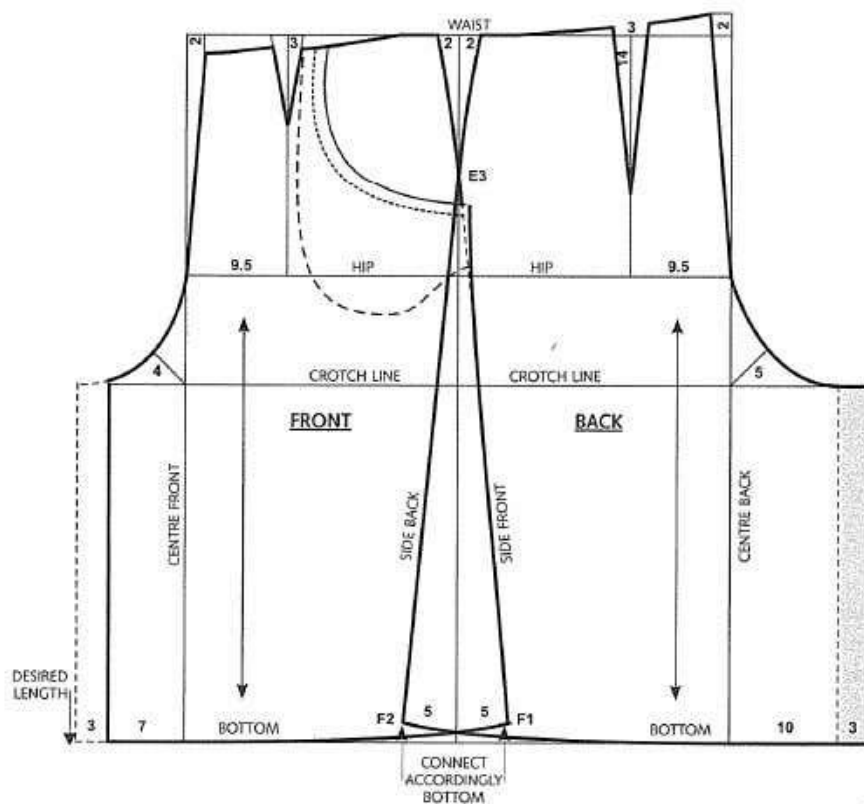
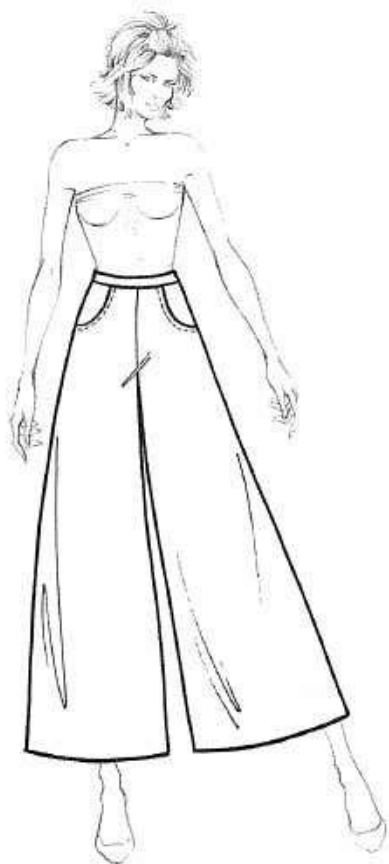
WITH DART AT THE CROTCH LINE



In addition to moving a piece of the front to the back, for fuller figures we can make a dart at the crotch line, which helps to adapt it perfectly to the individual's size and shape.



GAUCHO STYLE



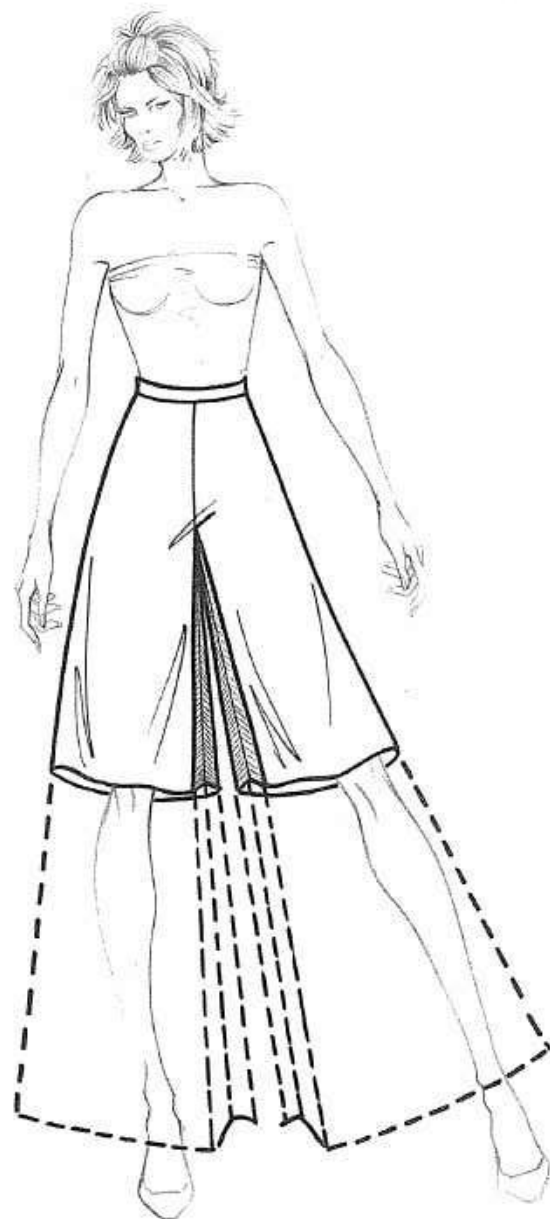
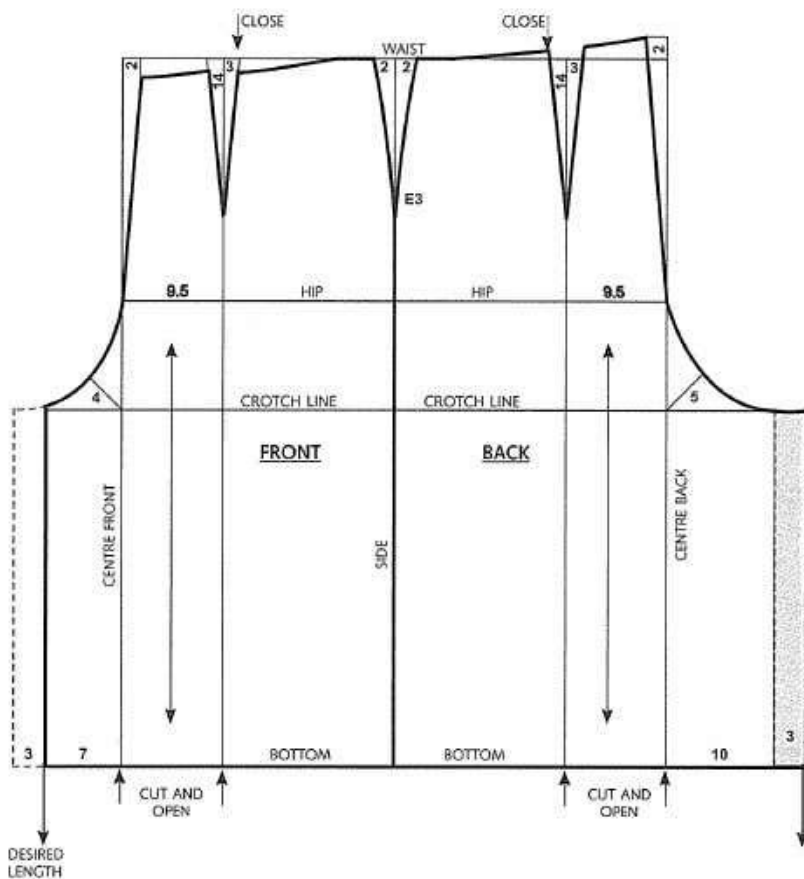
To have greater ease you must:

- Lengthen the waist dart of the front and the back to 14 cm.
- Lengthen the line dart M-M2 e N-N2.
- Cut and close the darts.
- Connect accordingly the bottom and the waist.
- Construct the basic culottes block.
- From the front inseam take away 1-2 cm and add to the back.

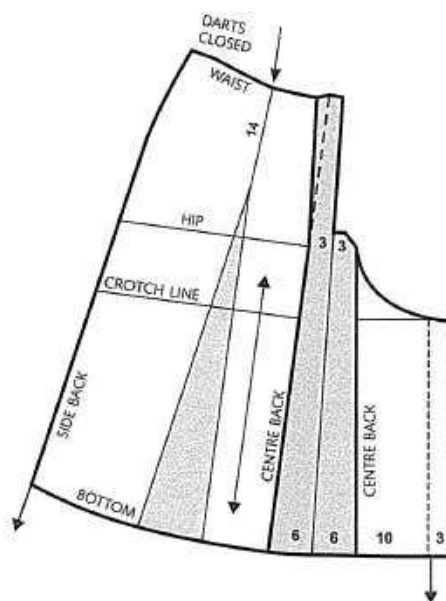
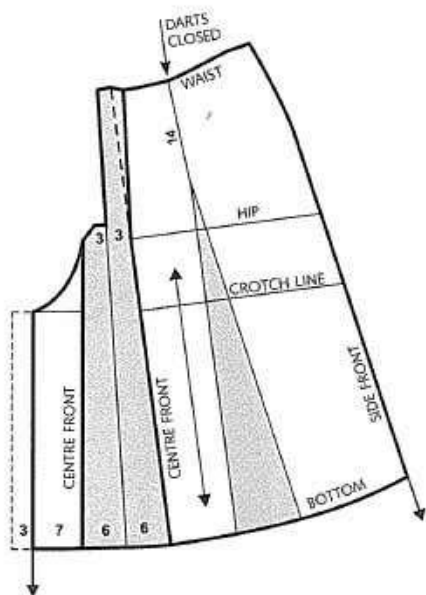
- On the bottom side line add 4-6 cm and join points E3 with F1 and E3 with F2.
- Draw pocket edge, lengthen the line by 1 cm, extending the side line, to make room for the hand, and join with side.
- Connect accordingly the bottom line.

FLARED CULOTTES

WITH INVERTED PLEAT AT THE INSEAM

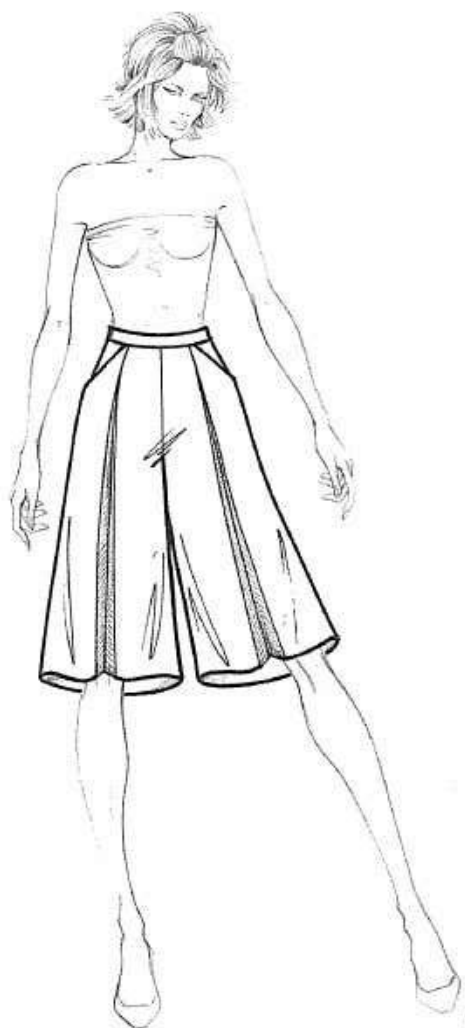
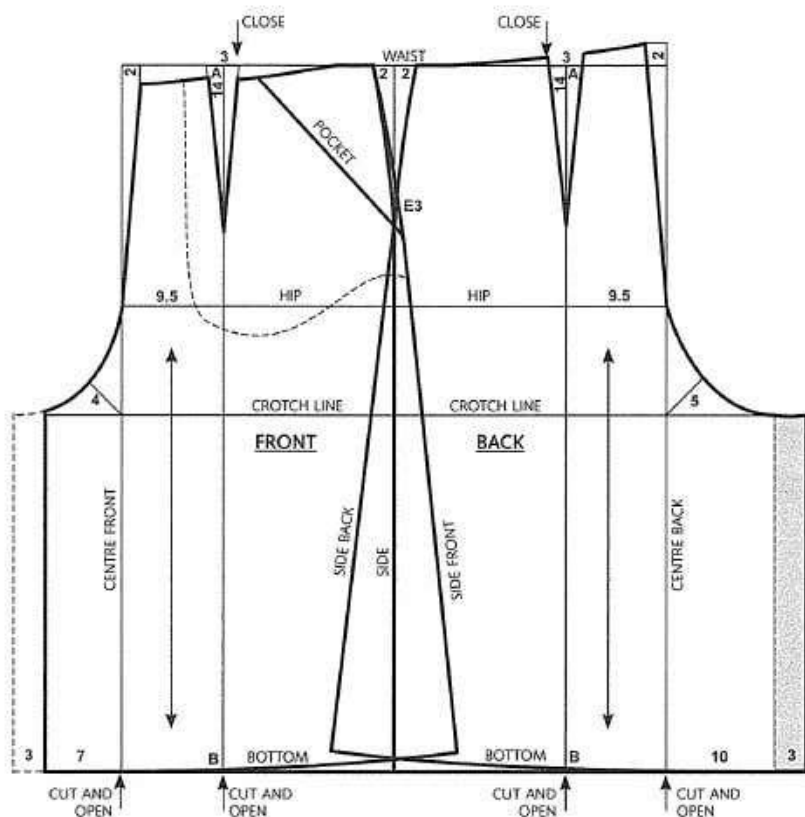


- Construct a pattern block for the Flared culottes by closing the darts.
- Cut along the centre front and centre back lines and insert the inverted pleat of the desired width; it can be either straight or flared, like the one shown here (6 cm at top and 12 cm at the bottom).



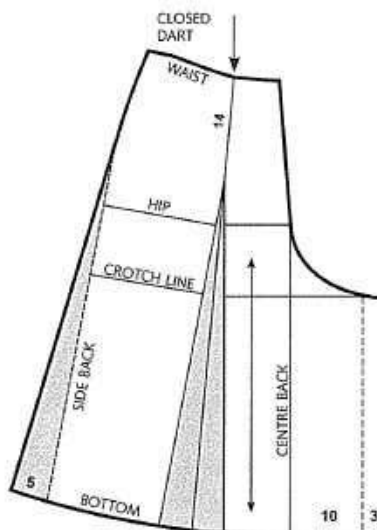
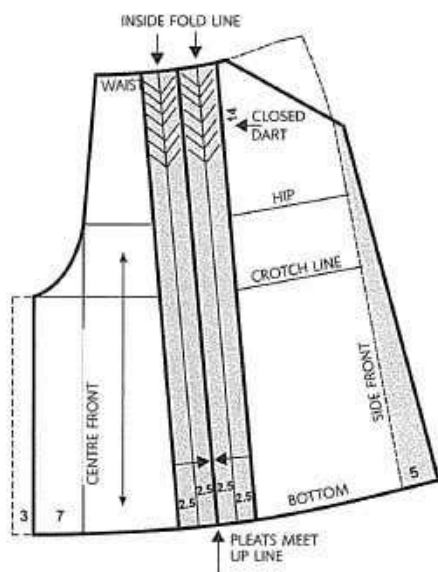
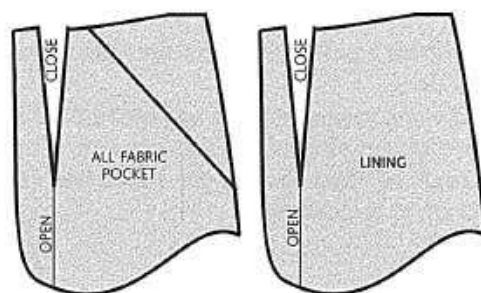
CULOTTES WITH 2 PLEATS

PARALLEL IN FRONT



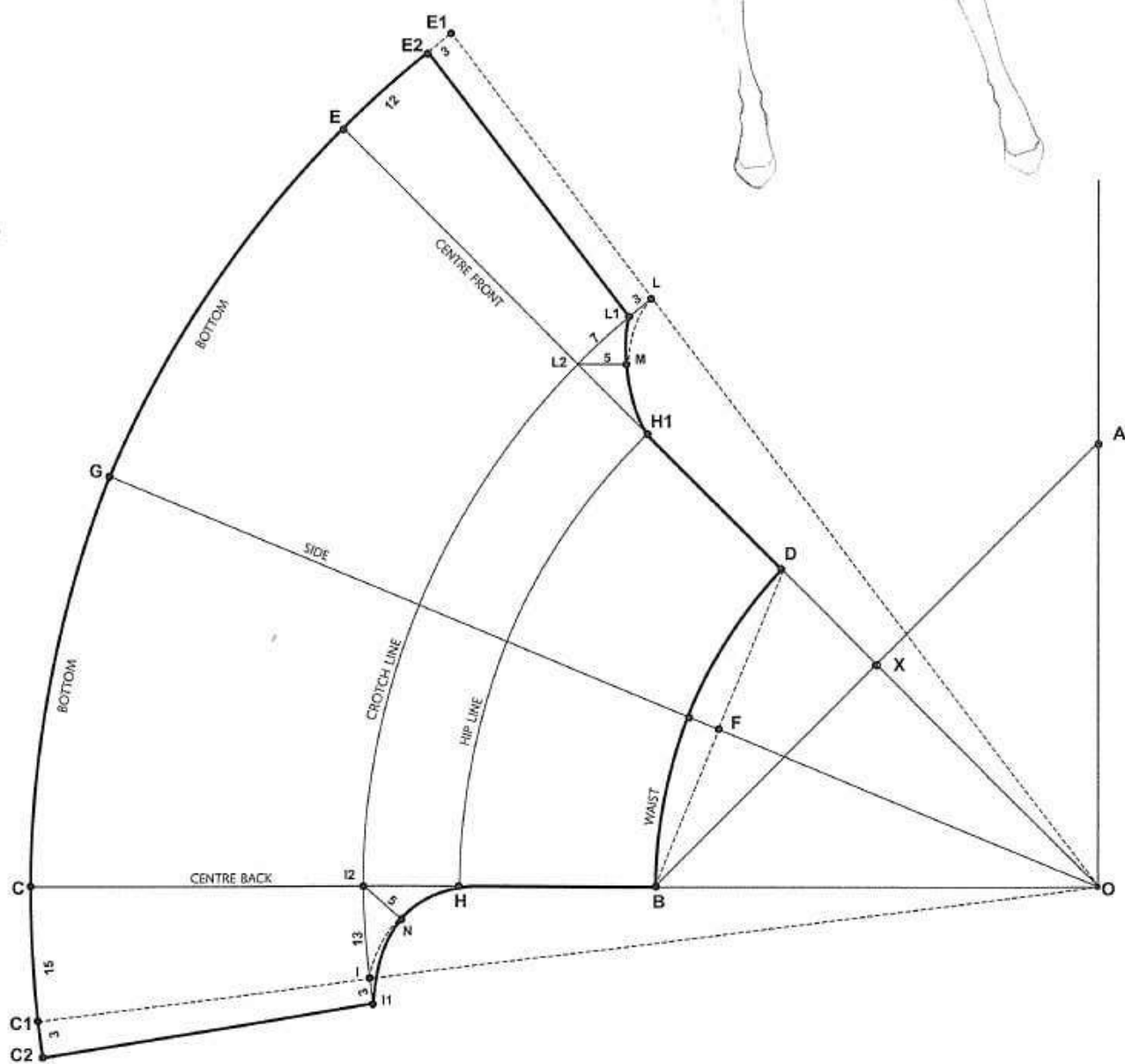
Parallel pleats inserted in culottes are equal above and below.

- Make the basic pattern, widened and flared.
- Draw a line, A-B, corresponding to the centre of the darts, where the pleats will be inserted.
- Cut the pattern along this line.
- Paste pattern on another sheet of paper, keeping the two parts separate on parallel lines and draw the inseam lines and the edges where the pleats meet up with them.



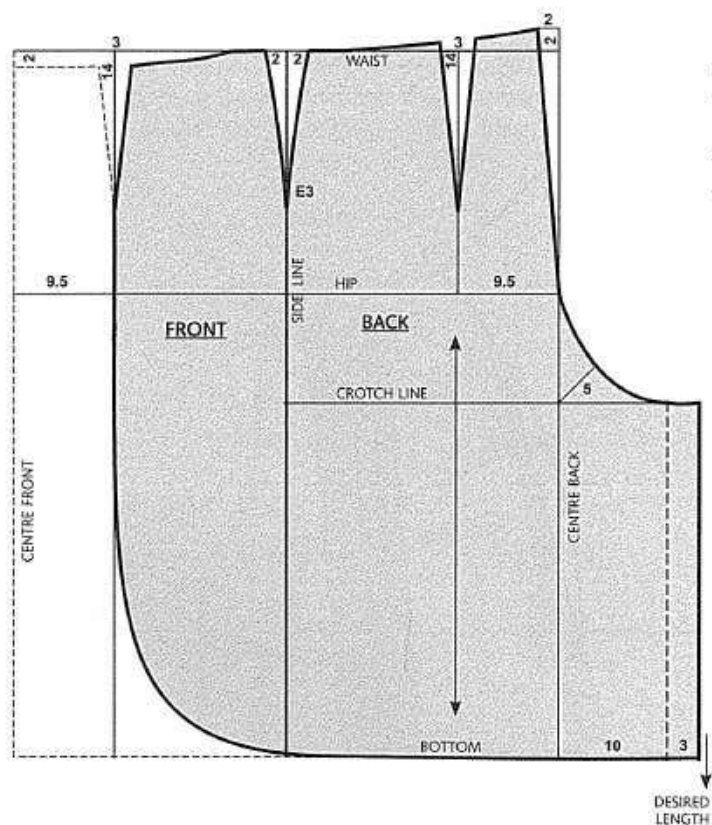
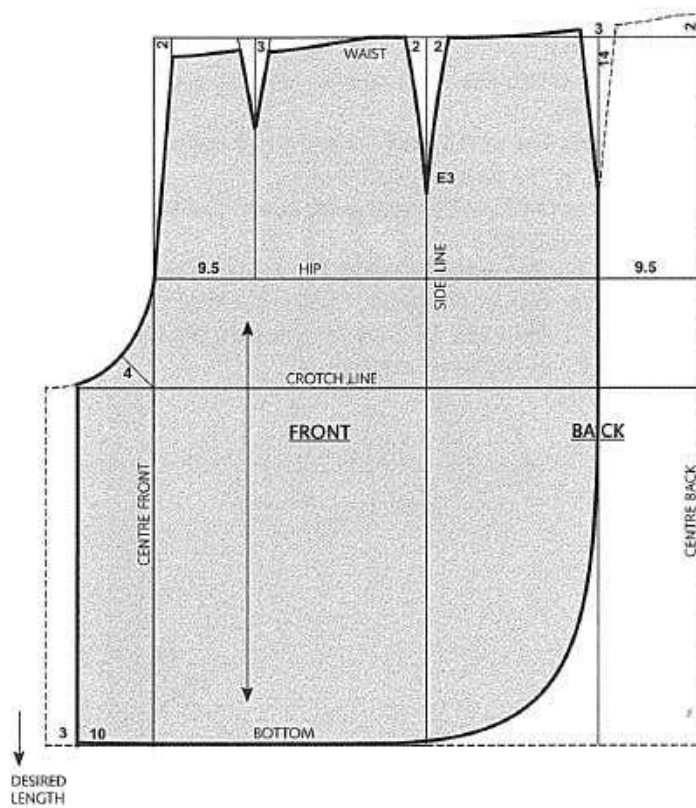
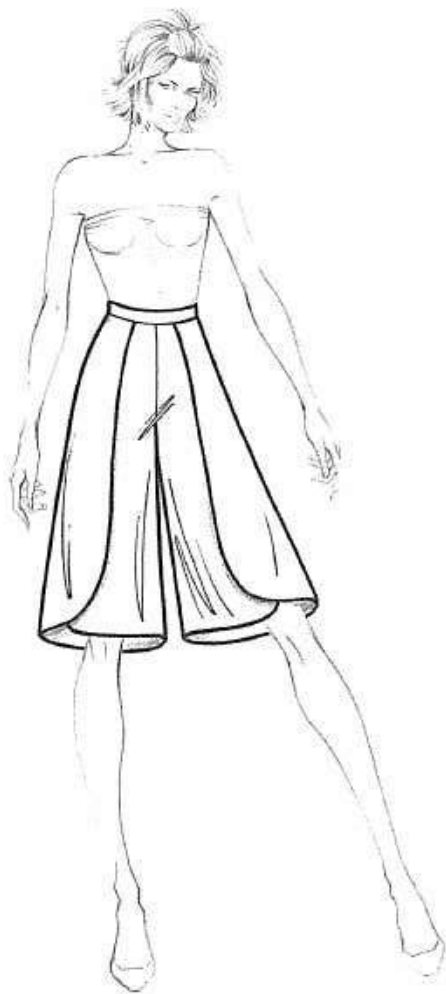
QUARTER-CIRCLE SKIRT CULOTTES

- Draw basic quarter-circle skirt block with desired measure.
- Draw the crotch line I-L at 10 cm (1/10 hip circum.) from the hip line.
- Extend this line to the front (point L) and the back (point I) by the same 10 cm.
- Draw lines O-E1, intersecting point L, and O-C1, intersecting point I.
- Join the hip line with the crotch line H1-I and H-I.
- For greater ease in the crotch, reduce the front crotch depth L-L1 and E1-E2 by 3 cm, and deepen the back H-I and C1-C2 by the same measure.



WRAP-AROUND CULOTTES

FRONT



- Construct the culottes block.
- From crotch front take away 3 cm and add to the back.
- Lengthen the side line to the darts line, for overlap.
- Connect accordingly the bottom.

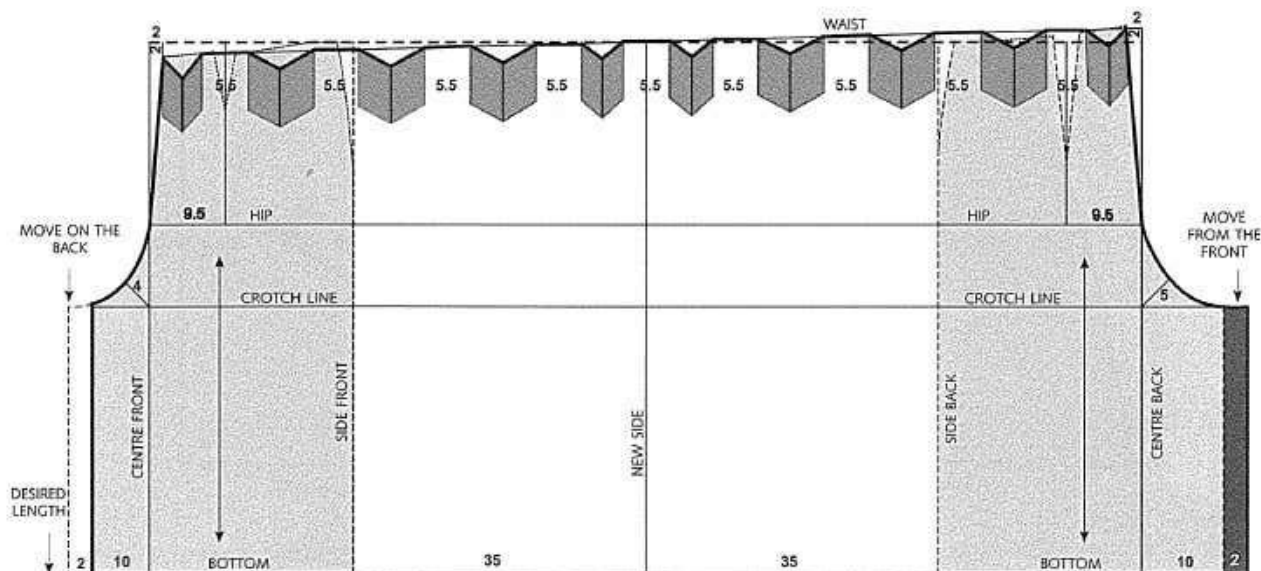
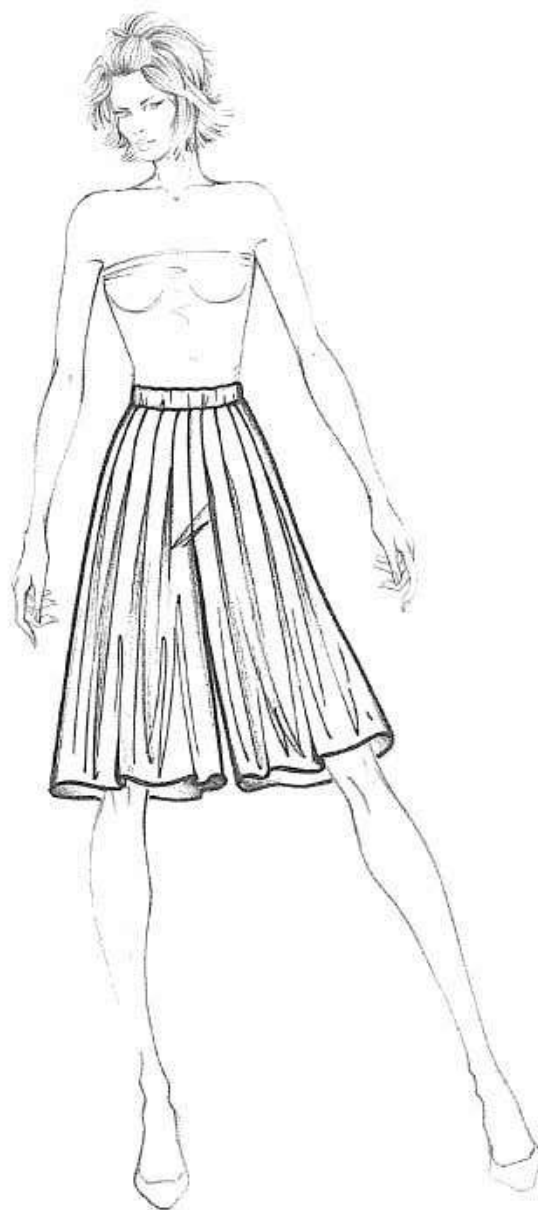
CULOTTES WITH SOFT GATHERS

To get the volume needed for this style, it must be added to the hip circumference.

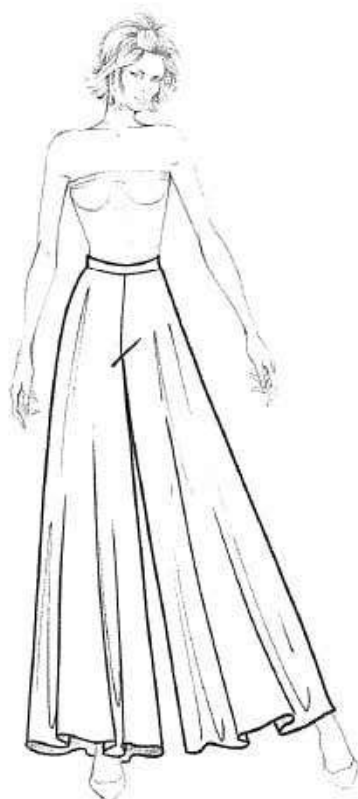
(e.g.: Circumf. $100 + 140 = 240$; $2 = 120$ cm).

This volume should be divided by the width of the gathers desired (e.g.: $140 : 7$ cm = n.20 pleats).

The gathers can be basted or fastened with straight pins before sewing the waistband.

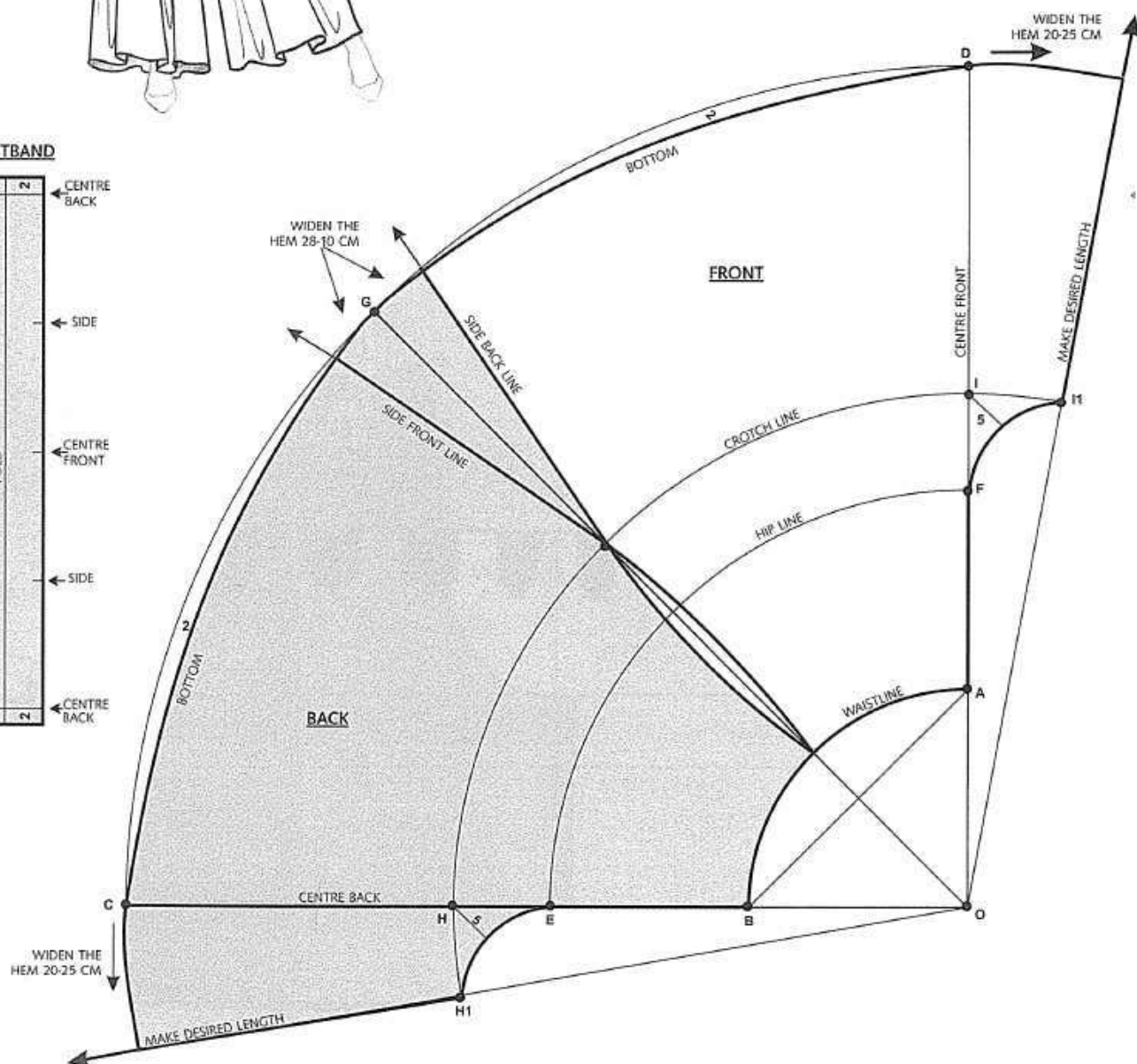
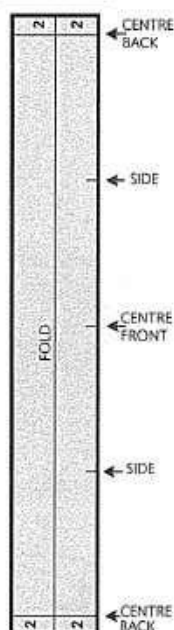


HALF-CIRCLE PALAZZO PANTS



- Construct the basic half-circle skirt.
- Draw point H on the centre front line, measuring the body rise from point B (30 cm).
- Taking O as your pivot point, with the O-H measurement, draw the H-I arc and write "crotch line".
- Draw points H1 and I1, extending the crotch line by 1/10th the hip circumference beyond the centre front and centre back.
- Widen the hem as desired or as called for, moving from the side seam and the centre front, as shown in the illustration.
- Shape the sides for a snug fit.

WAISTBAND



TROUSERS

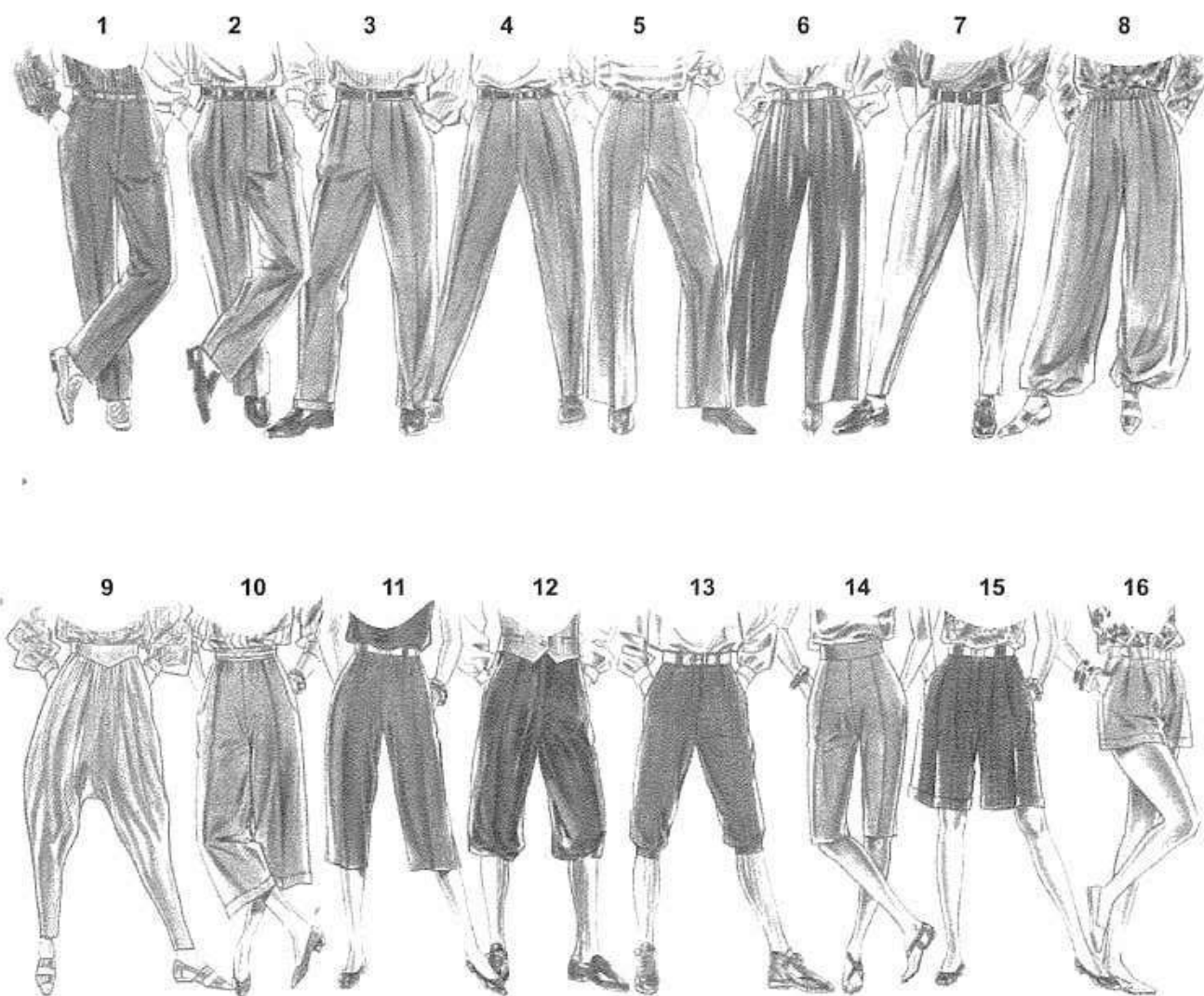
Trousers are both men's and women's wear, and they dress the individual from the waist down, with a fit that ranges from tight to loose, using various fabrics and in the most diverse styles.

Trousers derive from the barbarians' *brachae* used to protect against the violent cold of their lands.

In the lengthy historical period that followed their first appearance, they were constantly evolving with different styles: long

and tapered, puffy and bedecked with ribbons, knee-length, plus fours, wide at the ankle, and so forth.

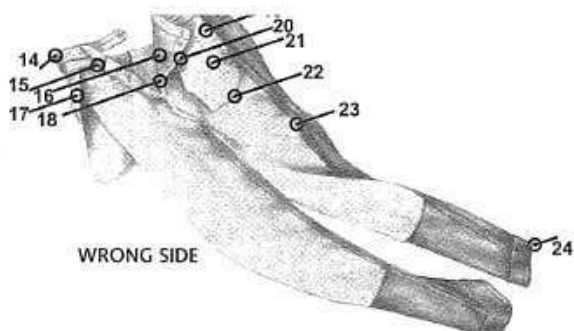
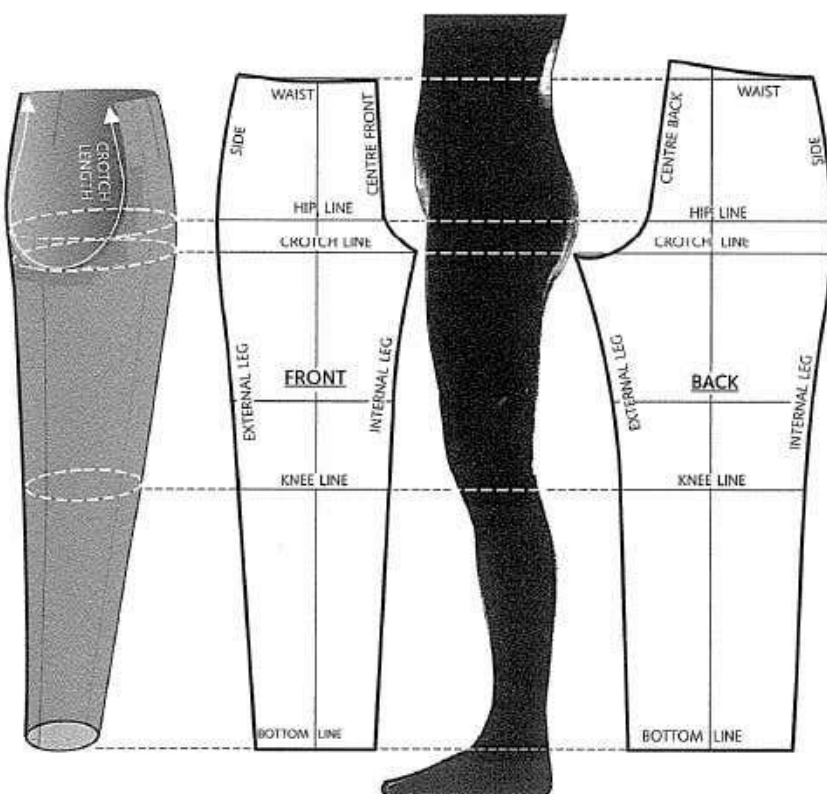
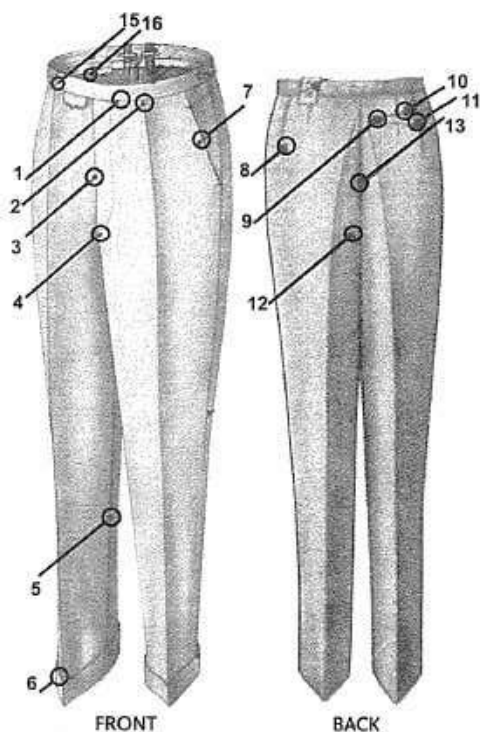
The first proper trousers appeared in England in around 1830 but did not become a women's garment until the student protests of the 1960s. By now, trousers are considered unisex and they have conquered a vast youth market, especially in the jeans and sportswear sectors, even if in male fashions, the classic look has maintained its market share.



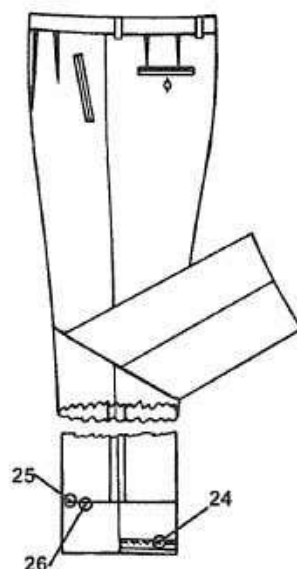
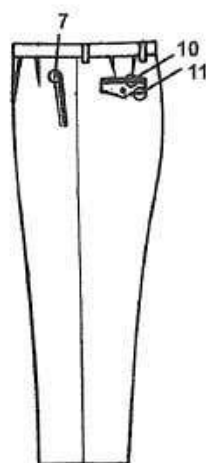
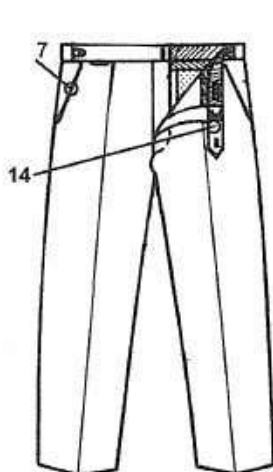
Trouser types: 1) Straight trousers without pleats. 2) Straight trousers with pleats. 3) Straight trousers with pleats and cuffs. 4) Cigarette Pants. 5) Flared pants or Bell bottoms. 6) Pyjama Pants. 7) Drawstring pants. 8) Harem pants. 9) Turkish pants. 10) Gaucho pants. 11) Cropped trousers. 12) Lederhosen or knicker-bockers. 13) Plus fours. 14) Capri pants. 15) Bermuda shorts. 16) Short shorts or hot pants.

PATTERN TERMINOLOGY

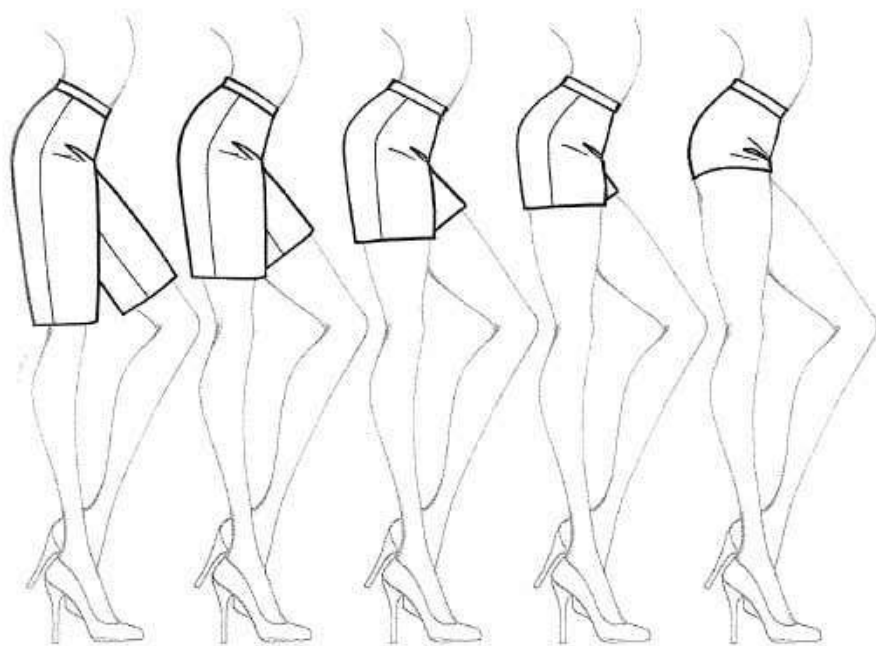
CLASSIC TROUSERS



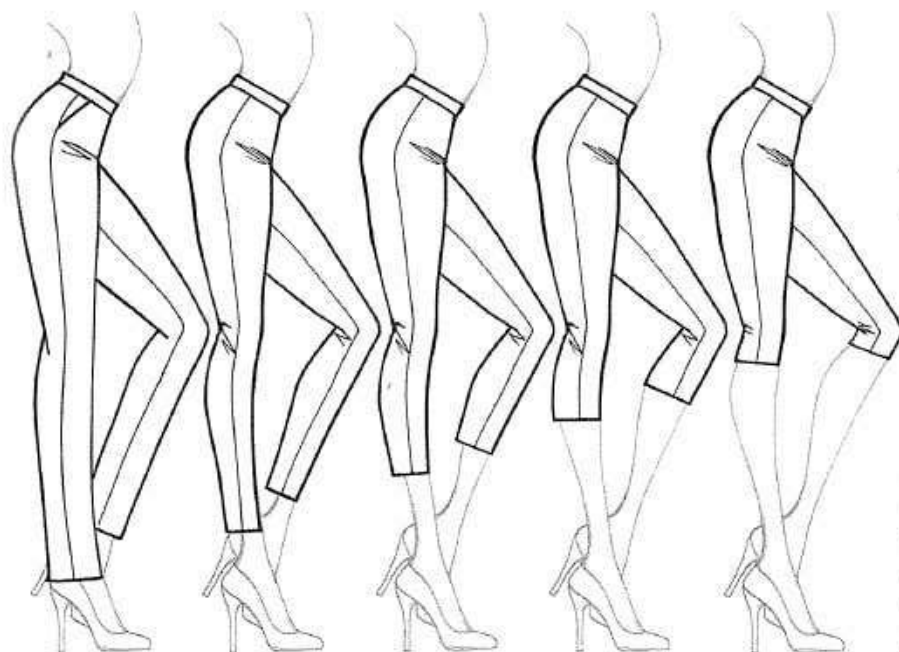
- 1) - Waistband.
- 2) - Front dart.
- 3) - Fly.
- 4) - Crotch front.
- 5) - Inseam.
- 6) - Cuffs.
- 7) - Front pocket.
- 8) - Back dart.
- 9) - Back pocket.
- 10) - Back pocket bar stitching.
- 11) - Back pocket flap.
- 12 and 13) - Crotch back.
- 14) - Waistband lining.
- 15) - Eyelets (if called for).
- 16) - Pocket lining seam.
- 17) - Pocket lining.
- 18) - Buttons or zipper.
- 19 and 21) - Pocket lining.
- 20) - Zipper or button fly.
- 21 and 22) - Lining.
- 23) - Side seam.
- 24) - Heel band.
- 25 and 26) - Hem stitching.



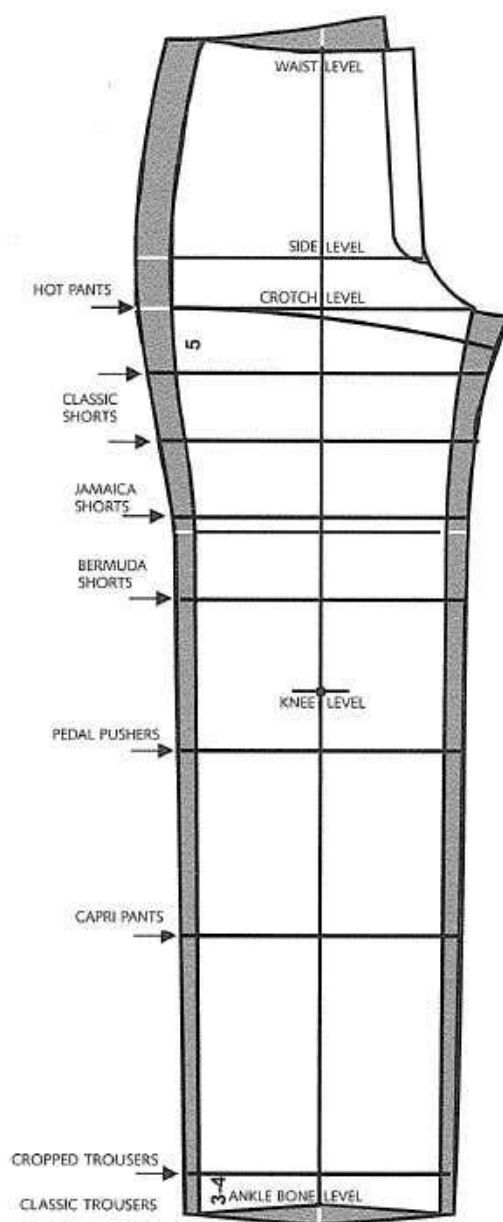
PANT LENGTH



BERMUDA SHORTS JAMAICA SHORTS CLASSIC SHORTS HOT PANTS



CLASSIC PANTS CROPPED PANTS CAPRI PANTS PEDAL PUSHERS



Pants can be of various lengths and styles:
Classic trousers - length to mid-heel, with or without cuffs.
Cropped pants - 3-4 cm above ankle bone.
Capri pants - mid-calf.
Pedal pushers - Just below the knee.
Bermuda shorts - Just above the knee.
Classic shorts - Mid-thigh.
Hot pants - Inseam length of 5 cm or less.

TROUSER MEASUREMENTS

Trouser measurements must be taken over the underclothes you normally wear, standing in a natural position, with weight uniformly distributed over both feet.

Tie an elastic or a tape around the waist, not too tight, for a reference point from which to take the measurements, and, for greater precision, you can tie another around the fullest point of the hips.

You must use a tape measure that is in good condition, neither deformed nor worn out, and hold it snugly, but not tightly, to the body, and for the circumferences, parallel to the floor; for the length measurements, perpendicular to the floor. Any ease adjustments should be added later, as needed.

WAIST CIRCUMFERENCE

Measure the circumference at the thinnest point of the waist, keeping the tape measure neither too loose nor too tight.

HIPS CIRCUMFERENCE

Measure at the fullest point of the hips and bottom, keeping the measuring tape perfectly parallel to the floor.

LEG CIRCUMFERENCE

Depending on the type of trouser, the measurements to take are:

- Circumference upper thigh
- Circumference mid-thigh
- Circumference knee
- Circumference calf
- Circumference ankle

WAIST TO HIP

Measure from the innermost curve of the waist, where you have the tape, to the fullest part of the hips.

WAIST TO KNEE

Measure from the waist to the knee.

WAIST TO ANKLE

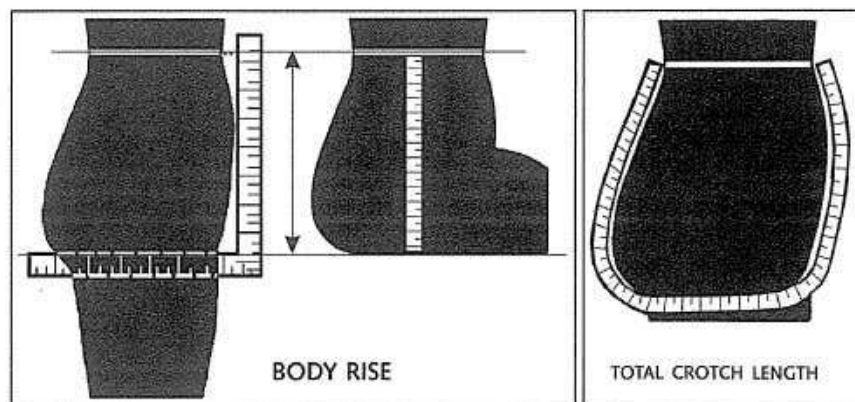
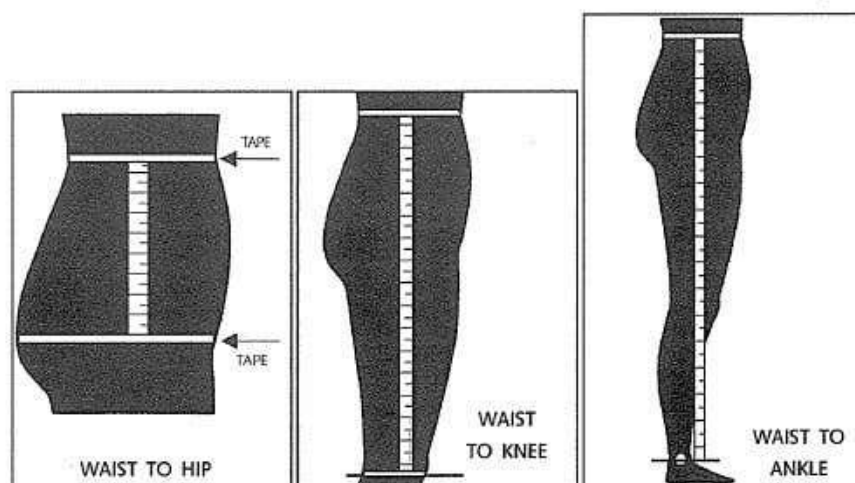
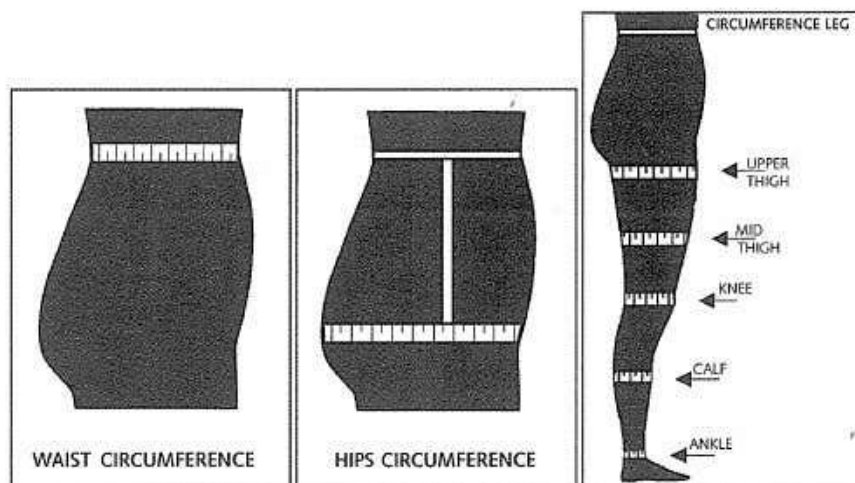
Measure from the waist to nearly below the lower ankle bone (malleolus).

BODY RISE

This measurement can be taken in two different ways. 1) Seated on a flat surface, measure on one side from the waist, following the curves of the side, down to the seat surface; 2) With a right-angled square ruler, resting at the bottom of the groin and at the top of the belly, the precise height is taken. This system is not widely used for a question of delicacy.

TOTAL CROTCH LENGTH

One end of the tape measure rests on the centre front of the waist and passing between the legs you measure up to the centre back of the waist, keeping the tape snug against the body.



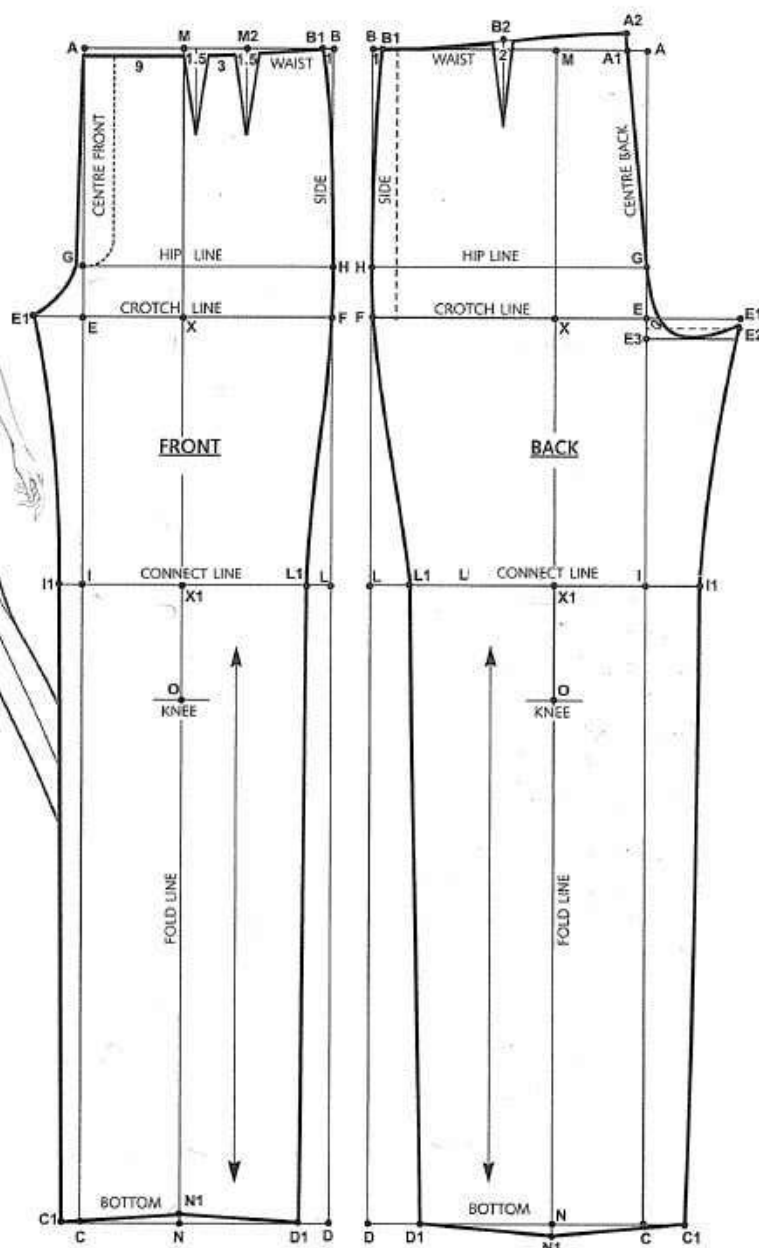
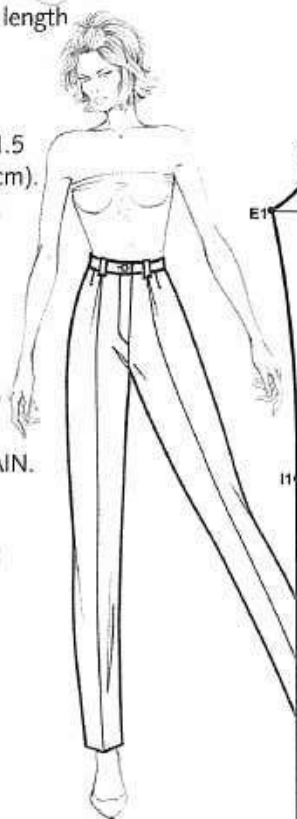
BASIC TROUSERS WITH PLEATS

Measurements: - Hip circumf. 92 + 2-4 cm ease.
- Waist circumference 68 + 1-2 cm ease.

- Hip length 20 cm. - Body rise 24 cm.
- Trouser length 105 cm.

Front

- Draw a rectangle A-B-C-D, with A-B equal to $\frac{1}{4}$ Hip circumference (e.g.: $92: 4 = 23$ cm) and A-C equal to total trouser length (e.g.: 105 cm).
- A-E is the body rise measurement (24 cm) - B-F is the same as A-E.
- E-E1 = $\frac{1}{16}$ the Hip circumf. minus 1.5 cm (e.g.: $92: 16 = 5.7 - 1.5 = 4.2$ cm).
- A-G is the Hip length measurement (20 cm).
- Draw G-H (Hip line).
- E-I is the same as A-E.
- Draw I-L.
- E1-X = half of E1-F (e.g.: $23 + 4.2 = 27.2: 2 = 13.6$ cm).
- Draw M-N passing through X and X1, and write PLEAT LINE and GRAIN.
- M-O = Knee height (e.g.: 60 cm).
- M-M2 = 7 cm.
- Draw the darts with the length and width required.
- B-B1 = 1 cm.
- X1-L1 = 12 cm.
- X1-I1 like X1-L1 (THIGH).
- N-N1 = 1 cm.
- N-C1 = 11 cm (or as desired).
- N-D1 like N-C1.
- Draw C1-N1-D1 (BOTTOM).
- Draw E1-G-A1 with a curved line.
- Draw E1-I1-C1 shaping it nicely.
- Draw B1-A1 shaping it nicely and write WAIST.
- Draw B1-H-F-L1-D1, shaped nicely.



Back

- Draw a rectangle A-B-C-D, with:
- A-B equal to $\frac{1}{4}$ Hip circumference + 2 cm (e.g.: $92: 4 = 23 + 2 = 25$ cm) and A-C equal to total trouser length (e.g.: 105 cm).
- A-E is the body rise measurement (e.g.: 24 cm).
- B-F is the same as A-E.
- E-E1 $\frac{1}{16}$ Hip circumference + 3 cm. (e.g.: $92: 16 = 5.7 + 3 = 8.7$ cm).
- E1-E2 = 1 cm.
- E-E3 = 2 cm.
- A-G is the Hip length measurement (e.g.: 20 cm).
- Draw G-H (Hip line).
- E-I is the same as A-E.
- Draw I-L.
- E1-X = half of E1-F (e.g.: $26 + 9 = 35: 2 = 17.5$ cm).
- Draw M-N passing through X and write PLEAT LINE and GRAIN.
- M-O Knee height. (e.g.: 60 cm).

- A-A1 = 3.5 cm.
- A1-A2 = 1-3.5 cm.
- B-B1 = 1 cm (check waist curves).
- B1-B2 discard = $\frac{1}{2}$ B1- A2.
- Draw the darts with desired length and width.
- X1-L1 = 13 cm.
- X1-I1 like X1- L1 (THIGH).
- N-n1 1 cm.
- N-C1 12 cm (or as desired).
- N-D1 like N-C1.
- Draw C1-N1-D1 (BOTTOM).
- Draw E2-G-A2 with a curved line.
- Draw E2-I1-C1 shaping it nicely.
- Draw B1- A2 shaping it nicely and write WAIST.
- Draw B1-H-F-L1-D1 shaped nicely.

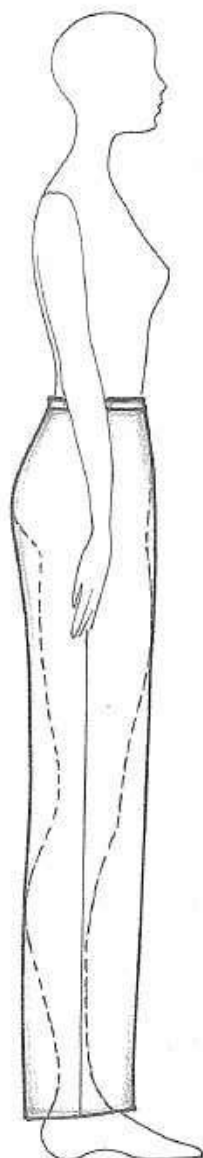
BASIC TROUSERS WITHOUT PLEATS

Measurements for trousers:

- Hip circumference 92 cm.

- Waist circumf. 68 cm. - Side height 20 cm.

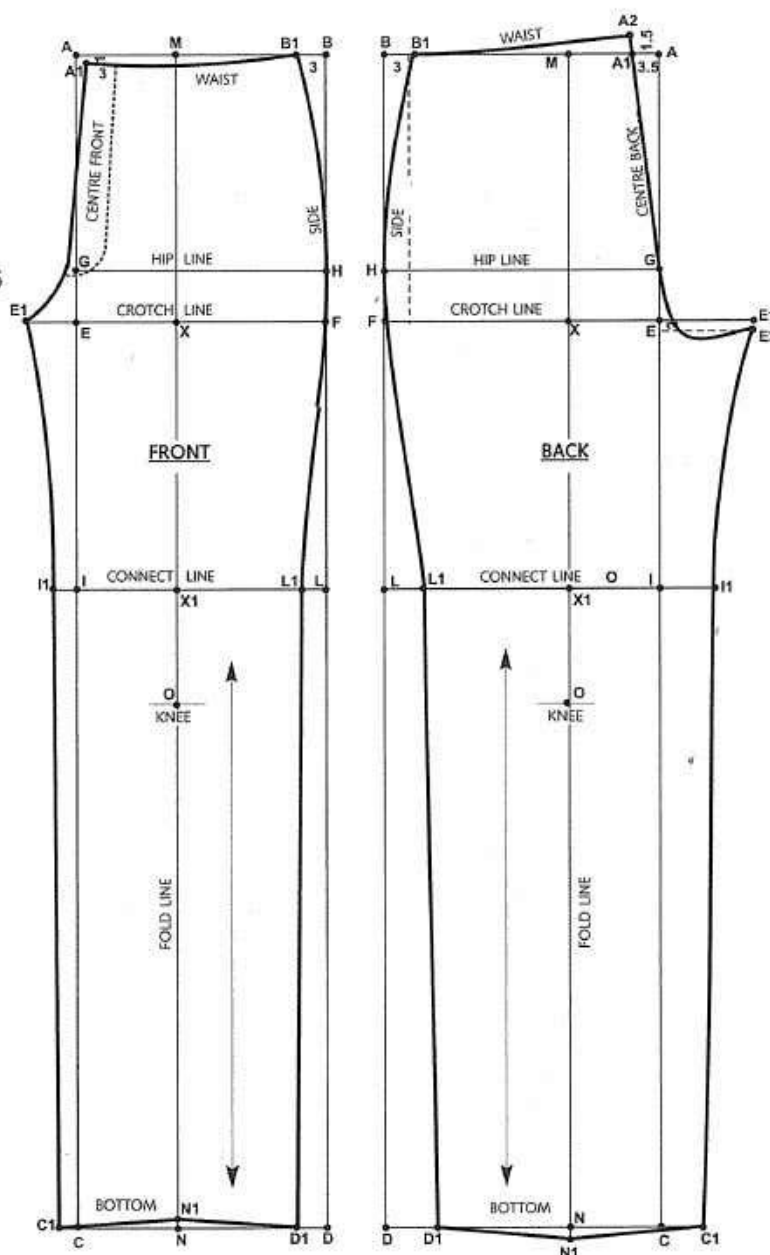
- Crotch height 24 cm. - Trouser length 105 cm.



Front

- Draw a rectangle A-B-C-D, with A-B equal to $\frac{1}{4}$ Hip circumference (e.g.: $92: 4 = 23$ cm) and A-C equal to total trouser length. (e.g.: 105 cm).*
- A-E is the body rise measurement (cm 24) - B-F is the same as A-E.
- $E-E_1 = \frac{1}{16}$ the Hip circumf. minus 1.5 cm (e.g.: $92: 16 = 5.7 - 1.5 = 4.2$ cm).
- A-G is the Hip length measurement (20 cm).
- Draw G-H (Hip line).
- E-I is the same as A-E.
- Draw I-L.
- E_1-X half of E_1-F (e.g.: $23 + 4.2 = 27.2: 2 = 13.6$ cm).
- Draw M-N passing through X and write PLEAT LINE and GRAIN.
- M-O Knee height (e.g.: 60 cm).
- A-A1 0.5 cm in both directions.
- B-B1 3 cm (waist curves).
- X_1-L_1 12 cm.
- X_1-I_1 like X_1-I_1 (THIGH).
- N-N1 1 cm.
- N-C1 11 cm (as desired).
- N-D1 like N-C1.
- Draw C1-N1-D1 (BOTTOM).
- Draw E1-G-A1 with a curved line.
- Draw E1-I1-C1 shaping it nicely.
- Draw B1-A1 shaping it nicely and write WAIST.
- Draw B1-H-F-L1-D1 shaped nicely.

*Note: For tight-fitting trousers, take 1 cm from the front ($23 - 1 = 22$ cm) and add 1 cm (instead of 2) to the back ($23 + 1 = 24$ cm).



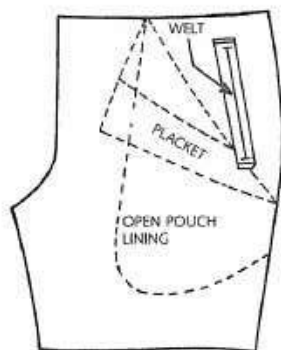
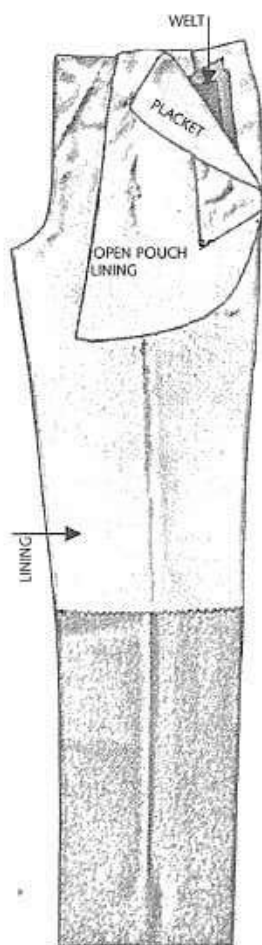
Back

- Draw a rectangle A-B-C-D, with A-B equal to $\frac{1}{4}$ Hip circumference + 2. (e.g.: $92: 4 = 23 + 2 = 25$ cm) and A-C equal to total length trouser (e.g.: 105 cm).
- A-E is the body rise measurement (e.g.: 24 cm).
- B-F is the same A-E.
- $E-E_1 = \frac{1}{16}$ Hip circumference plus 3 cm. (e.g.: $92: 16 = 5.7 + 3 = 8.7$ cm).
- $E_1-E_2 = 1$ cm.
- A-G is the Hip length measurement (e.g.: 20 cm).
- Draw G-H (Hip line).
- E-I is the same as A-E.
- Draw I-L.
- E_1-X = half of E_1-F (e.g.: $25 + 8.7 = 33.7: 2 = 16.8$ cm).
- Draw M-N passing through X and write PLEAT LINE and GRAIN.

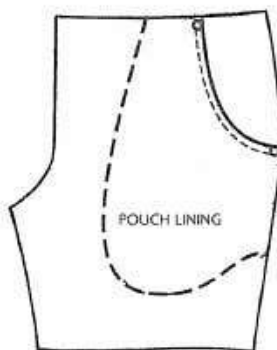
- M-O = Knee height (e.g.: 60 cm).
- A-A1 = 3.5 cm.
- A1-A2 = 1-3.5 cm.
- B-B1 3 cm (check waist curves).
- $X_1-L_1 = 13$ cm.
- X_1-I_1 like X_1-L_1 (THIGH).
- N-N1 = 1 cm.
- N-C1 = 12 cm (as desired).
- N-D1 like N-C1.
- Draw C1-N1-D1 (BOTTOM).
- Draw E2-G-A2 with a curved line.
- Draw E2-I1-C1 shaping it nicely.
- Draw B1-A2 shaping it nicely and write WAIST.
- Draw B1-H-F-L1-D1 shaped nicely.

DETAIL OF CLASSIC TROUSERS

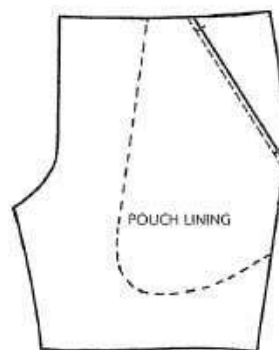
FRONT POCKETS



WELT POCKET

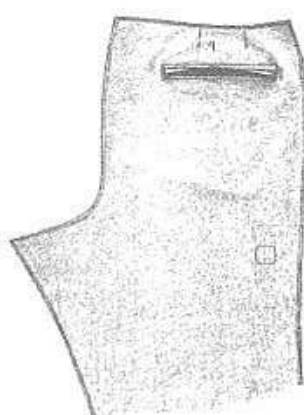


JEANS POCKET

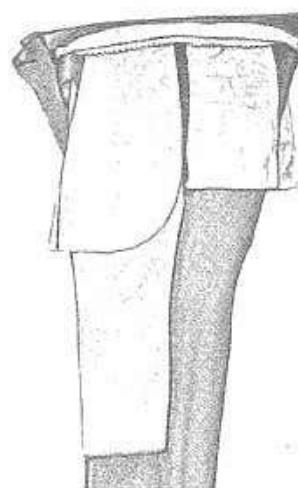


DIAGONAL POCKET

BACK POCKETS

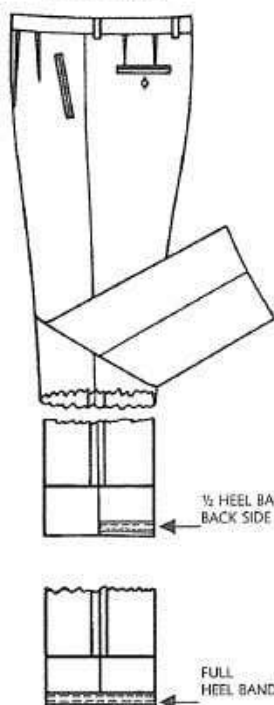


INSIDE POCKETS WITH TOPSTITCHING

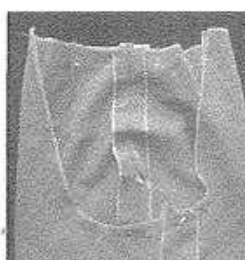


INSIDE POUCH LINING

HEEL BANDS



ASSEMBLY

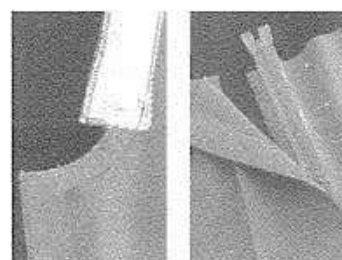


SEAM ALLOWANCES



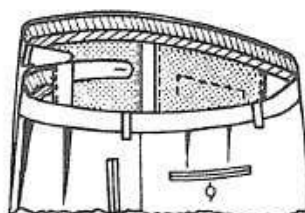
CROTCH SEAM

ZIPPER



ZIPPER INSTALLATION

WAISTBAND



ASSEMBLY WAISTBAND AND BELT LOOP

SEAM ALLOWANCES

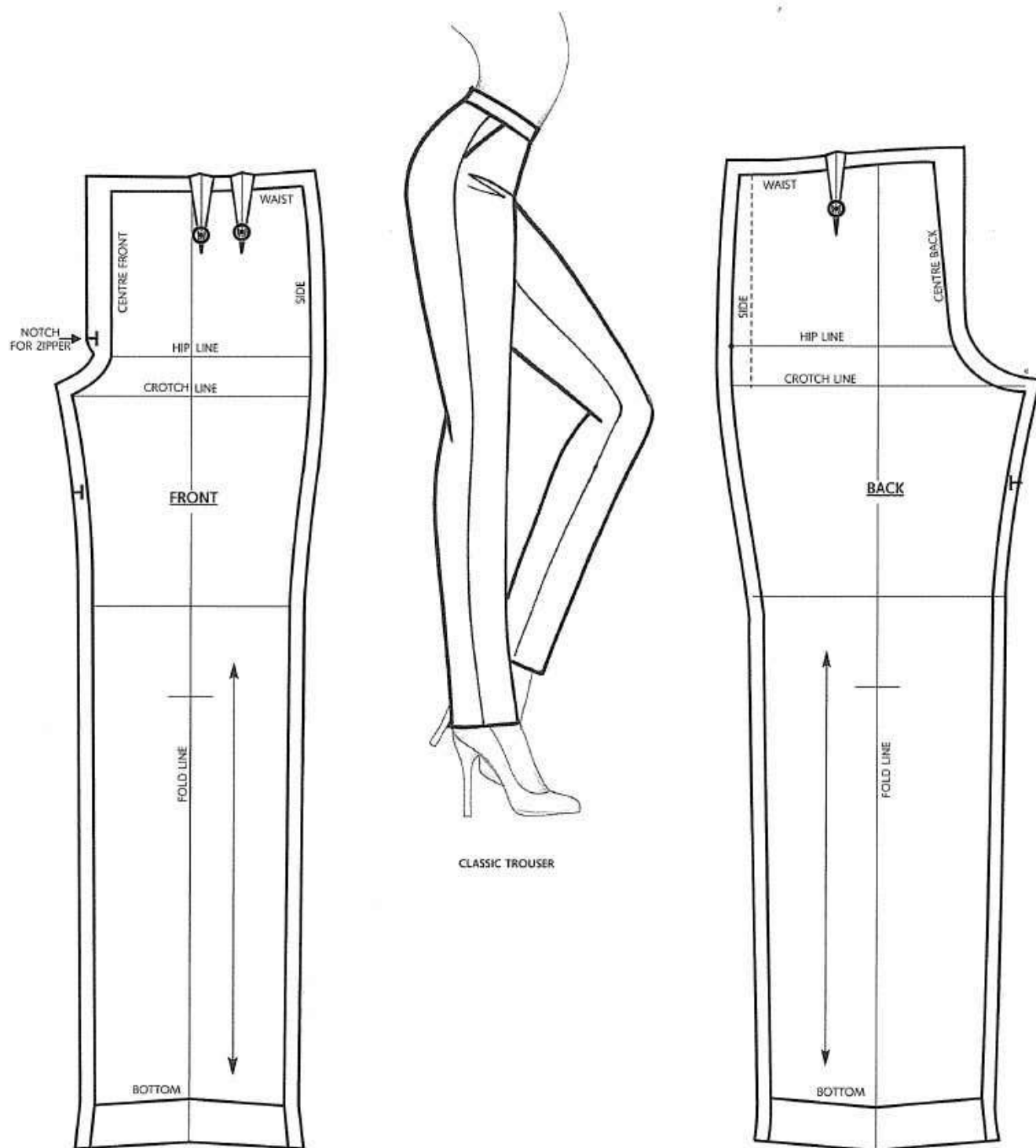
BASICS

Trouser patterns are made without seam allowances, so it is necessary to add them: directly on the fabric, if made by the tailor; on the paper pattern for industrial applications, before proceeding to the size grading.

The seam allowances can vary in accordance with the pattern parts, the type of apparel, and the kind of work.

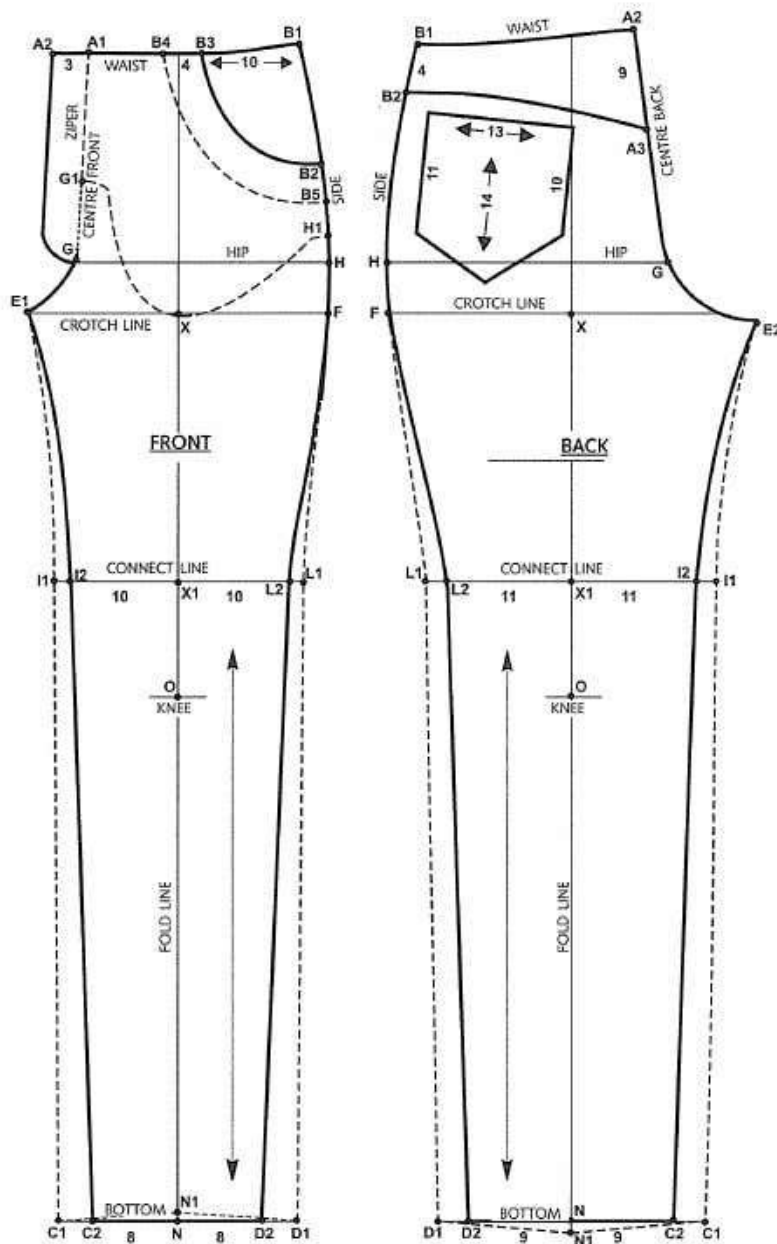
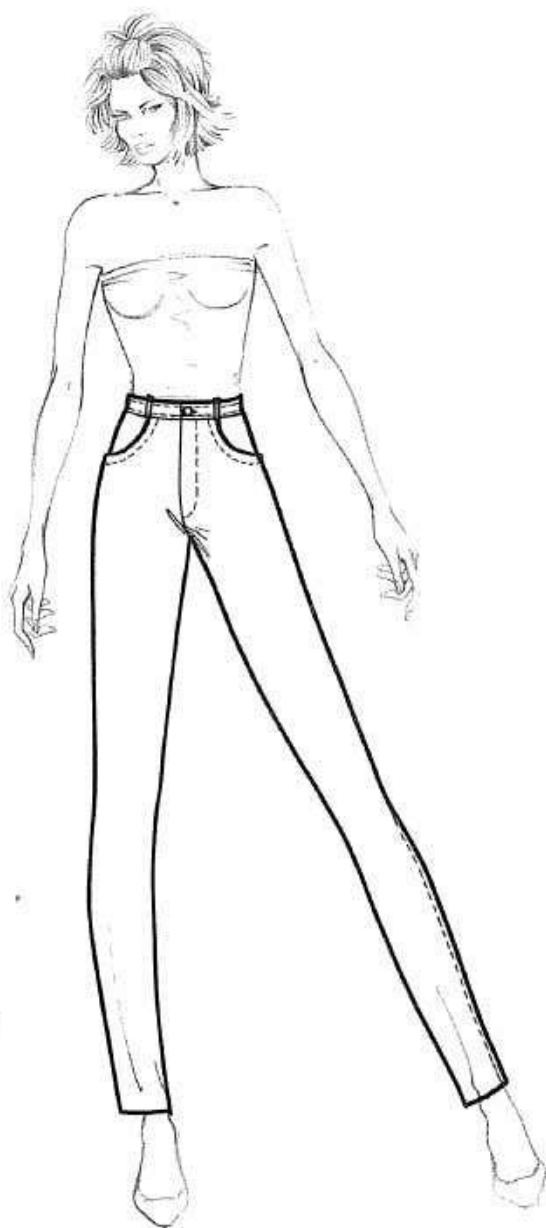
In general, the seam allowances are made in this way:

- Waist 1.3 cm.
- Internal leg 1.3 cm.
- External leg and side 1.7-2.5 cm.
- Crotch 1.3 cm.
- Zipper placket 2-2.5 cm.
- Hem 2.5-6 cm or as you like.
- Centre back 2.5-3.5 cm, for possible modification.

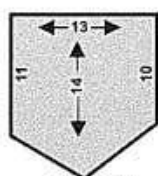


BASIC JEANS

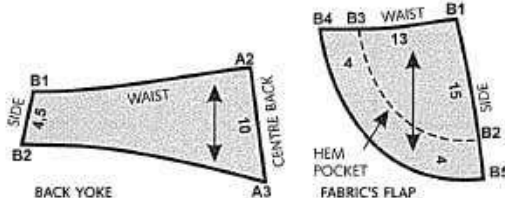
WITH BACK YOKE



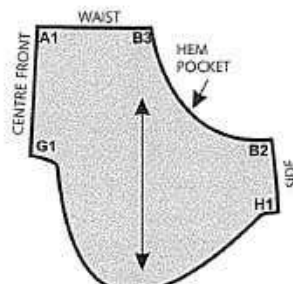
- Draw the basic trousers without dart.
- Reduce legs by 1.5 cm at points I1 and L1, both in front and in back.
- Draw points C2 and D2 with desired measurements (back is wider by 2 cm).
- Join the points E1-I2-C2 and F-L2-D2 on the front.
- Join the points E2-I2-D2 and F-L2-C2 on the back.
- Draw the back yoke A2-A3-B2-B1 with desired measurements.
- Draw back pocket with desired measurements and shape.
- Draw front pocket B2-B3 with desired shape.
- Draw flap B4-B5 about 4 cm from the pocket hem.
- Draw big pocket lining A1-G1-X-H1-B1 over which is sewn the fabric flap.
- Draw small pocket lining (which is sewn at the hem pocket) A1-G1-X-H1-B5-B4.



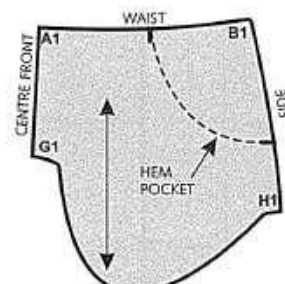
BACK POCKET



BACK YOKE



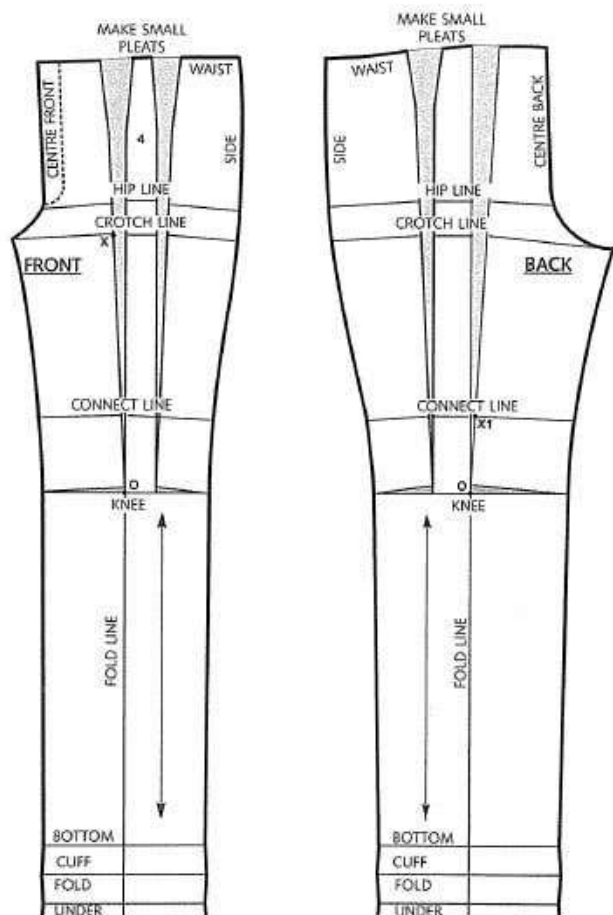
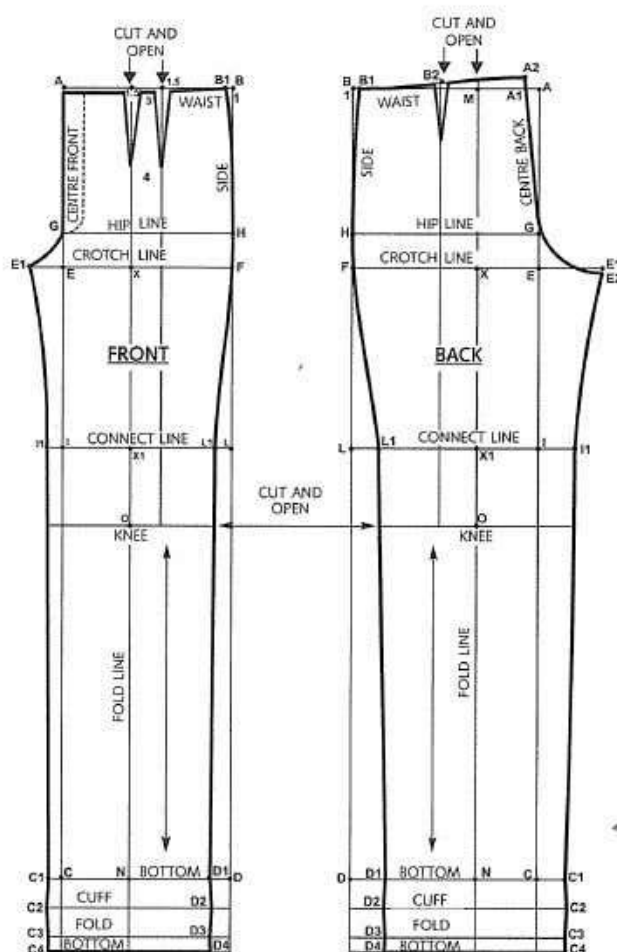
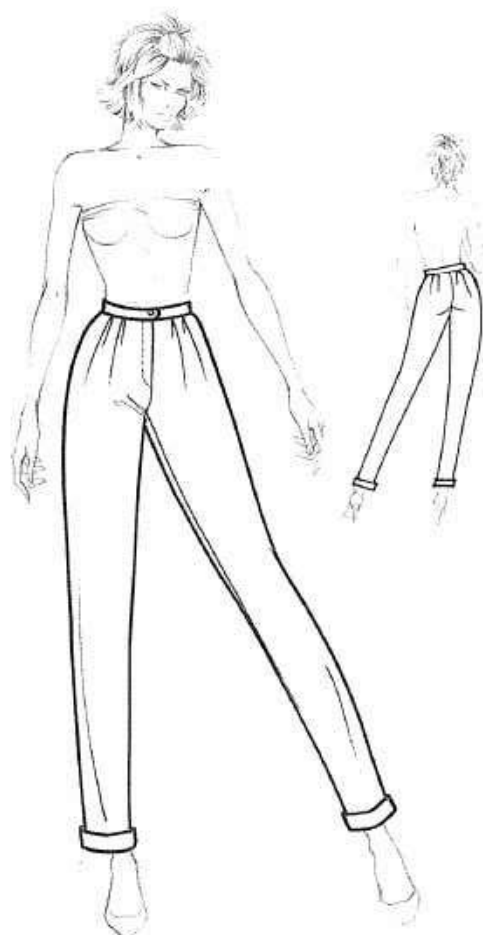
SMALL POUCH



LARGE POUCH

BAGGY PANTS

WITH CUFFS



BASIC TROUSERS WITH PLEATS

- Draw the basic trousers with darts.
- Draw two parallel lines down to the knees, 4-5 cm apart, keeping the existing darts in the centre.
- Slash the lines and the cross line at the knee.
- Open by the amount desired, depending on the fullness, as shown in the figure.

Cuffs

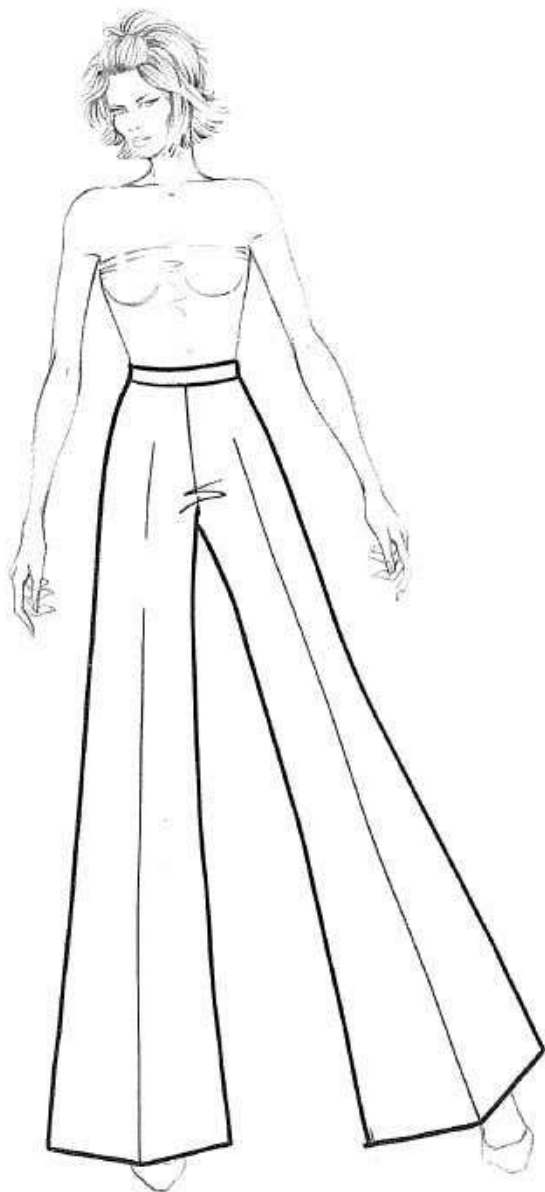
- Extend the hem by 2 ½ times the cuff height, drawing the shape based on the original slant.

MATERNITY PANTS

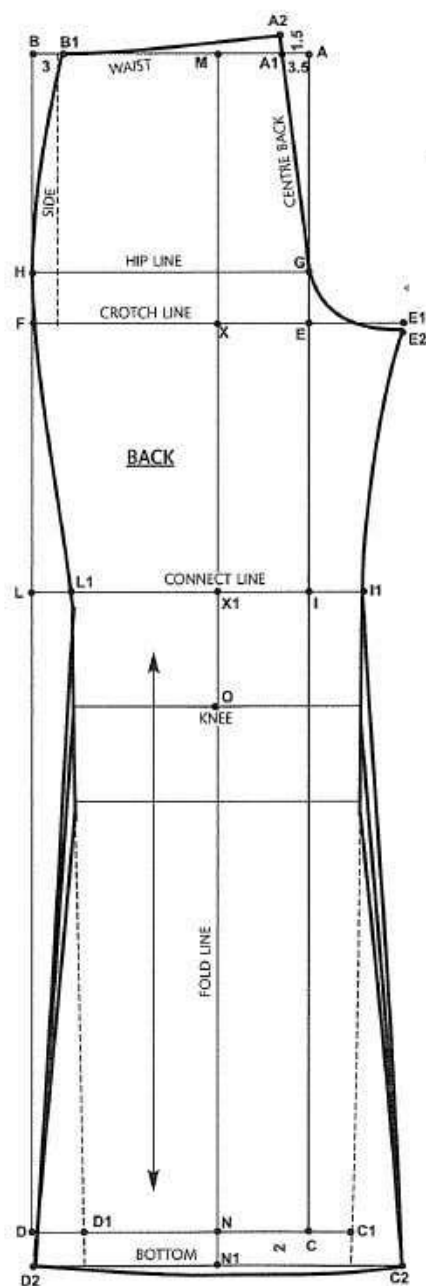
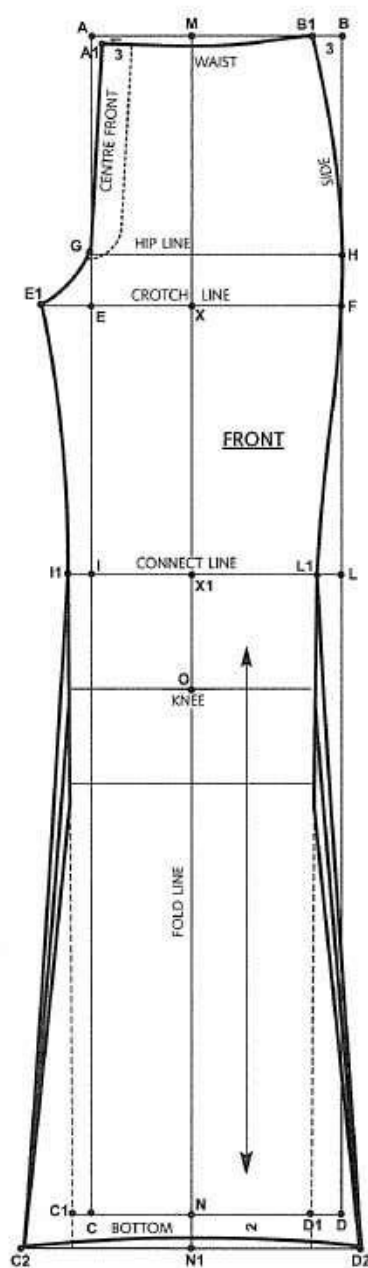


- Draw the basic trousers with desired measures and fit.
- Starting from the waist, draw two lines across the front at 4.5 cm from the centre front and 5 cm from the side seam, to the connect line.
- Slash and open at top by 4-5 cm (or as you desire).
- Raise the waist point by 5 cm on the centre front and by 1 cm on the side
- Starting from the waist, draw a line across the back at 3 cm from the centre back down to the connect line.
- Slash and open by 4-5 cm.
- Raise the waist point by 1 cm.
- Move the fold line 1.5 cm toward the centre at the bottom.
- Neatly join all the lines.
- The back waistband is elasticized.

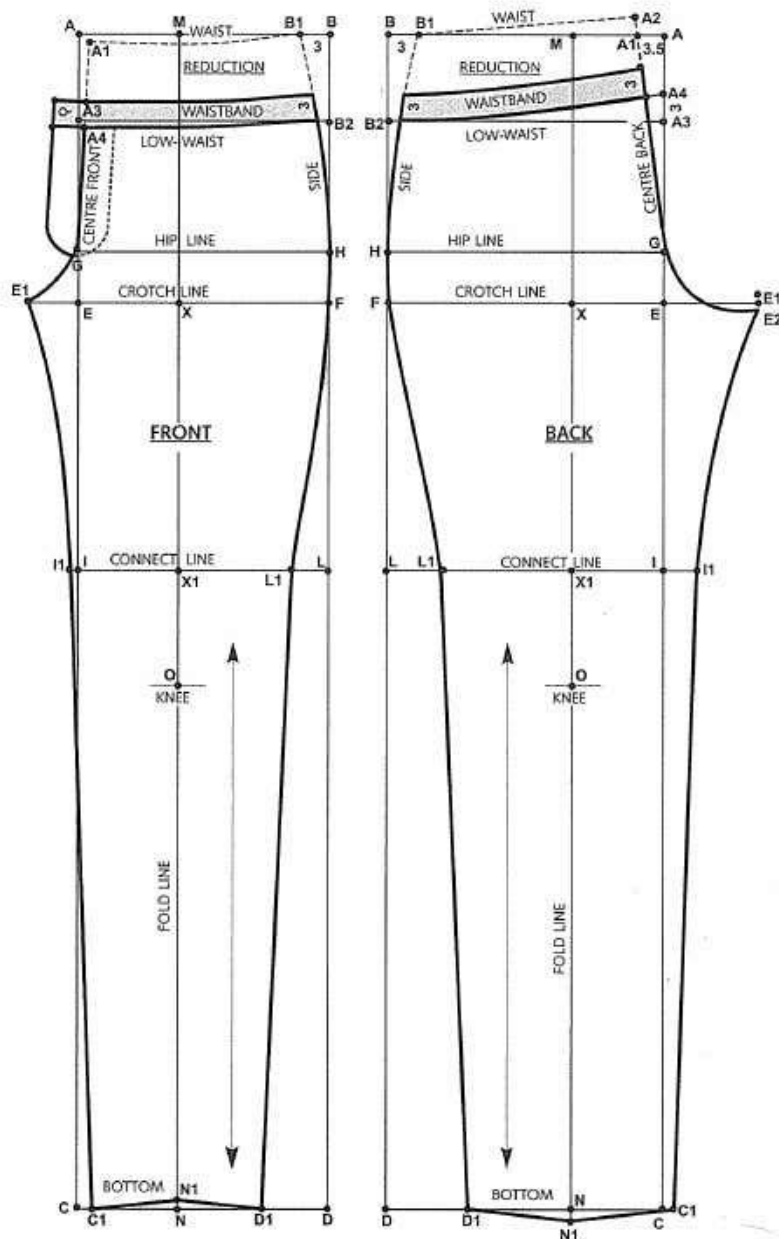
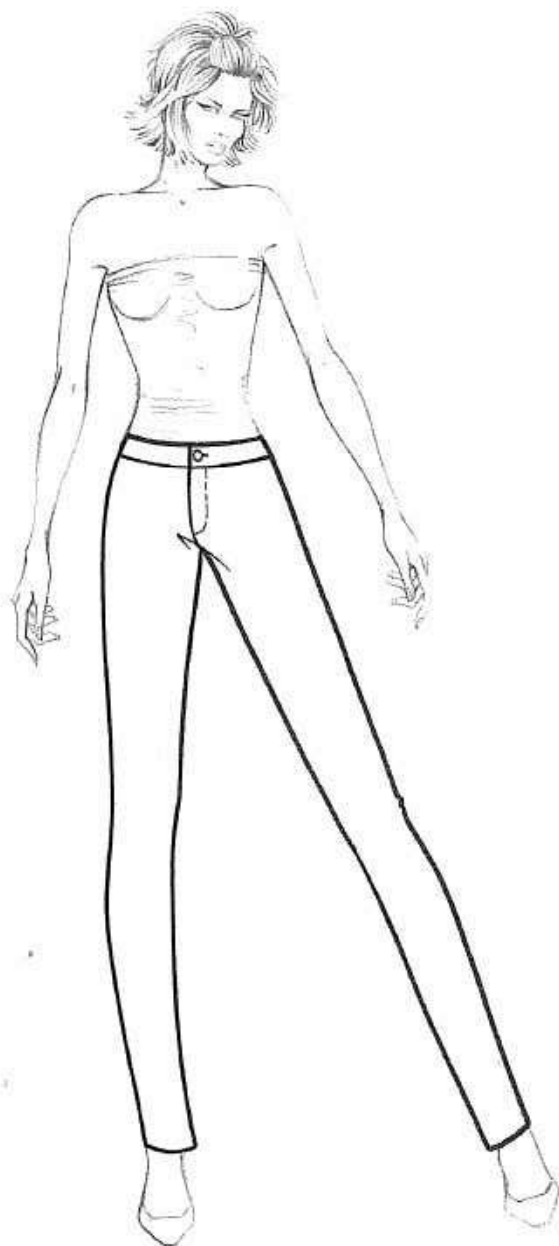
FLARED PANTS OR BELL-BOTTOMS



- Make the basic trousers without darts.
- Lengthen the bottom by 1-2.5 cm, depending on the type of heels worn.
- Establish the point where the leg starts to flare, whether above the knee, at the knee, or below it.
- Widen the bottom by the desired measure.
- Draw the lines joining the start and end of the flare.
- Use a curved line to correct the bottom run.



LOW-WAISTED PANTS

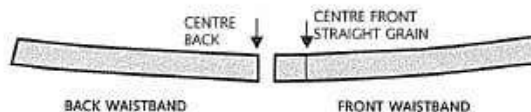


Measurements: - Hip circumf. 92 cm. - Waist circumf. 68 cm. - Hip height 20 cm. - Body rise 24 cm. - Trouser length 105 cm.

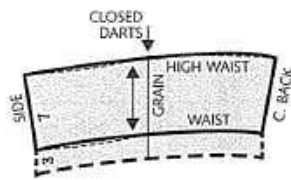
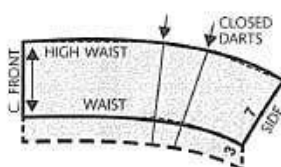
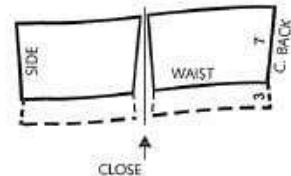
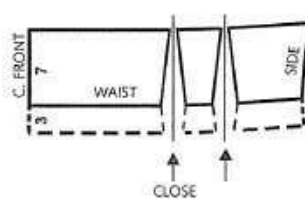
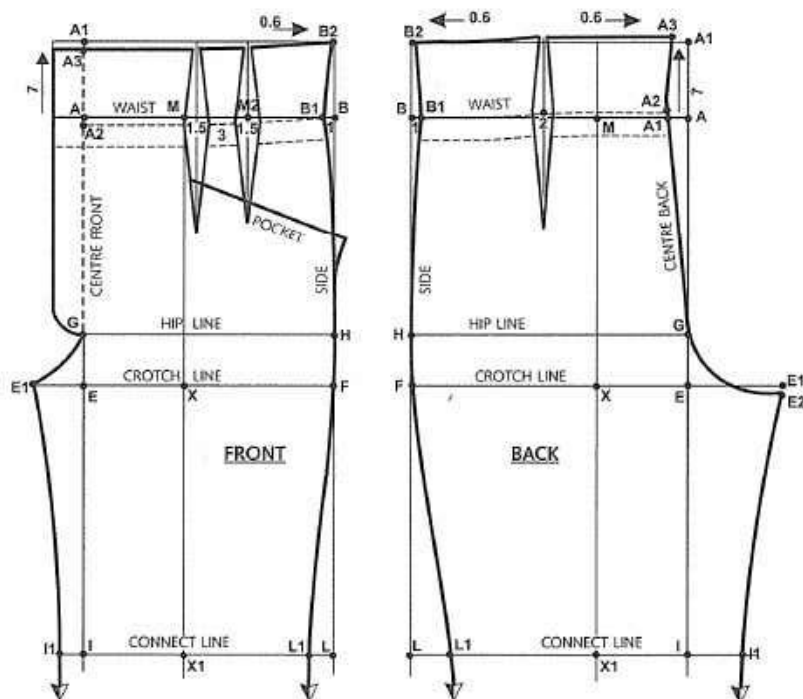
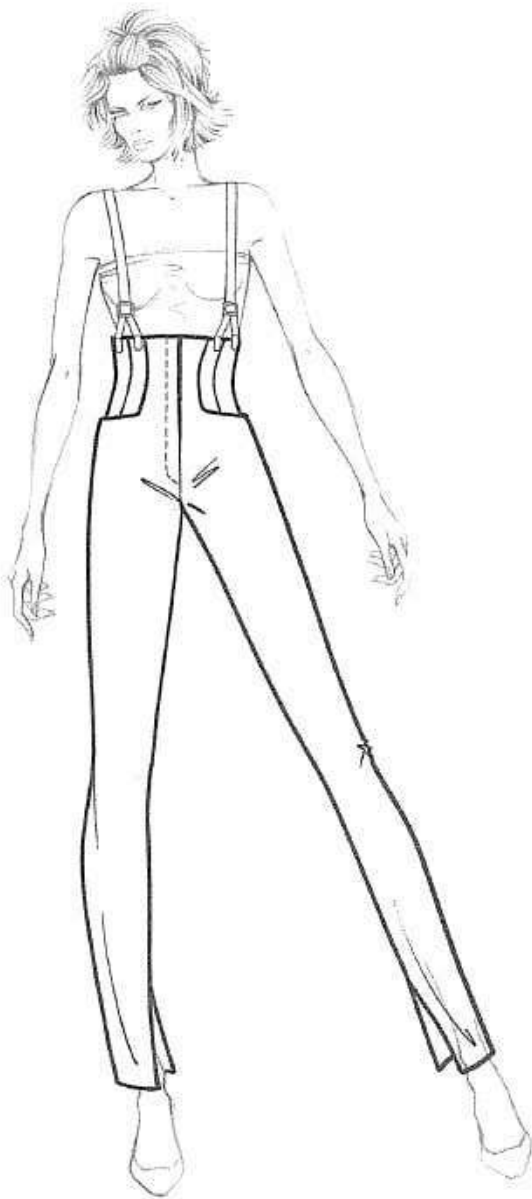
- Draw the basic trousers without darts.
- Move the front and back waist points A-A3 down by 5-8 cm, or as required by the style, and mark the point.
- Draw the lower waistline A3-B2 on front and back.
- Raise the centre back waistline A3-B2 by $1.5 + 1.5$ cm for the fit.
- Drop the centre front waistline A3-A4 by 0.5 cm.
- Draw the waistband with a line parallel to the lower waistline, at desired height (e.g.: 3 cm).
- Copy the front and back waistband pieces and extend the front one by 3 cm for the button.



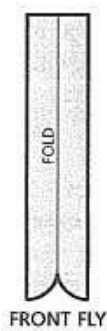
CUFF FRONT



HIGH-WAISTED PANTS



WAISTBAND INNER FACING

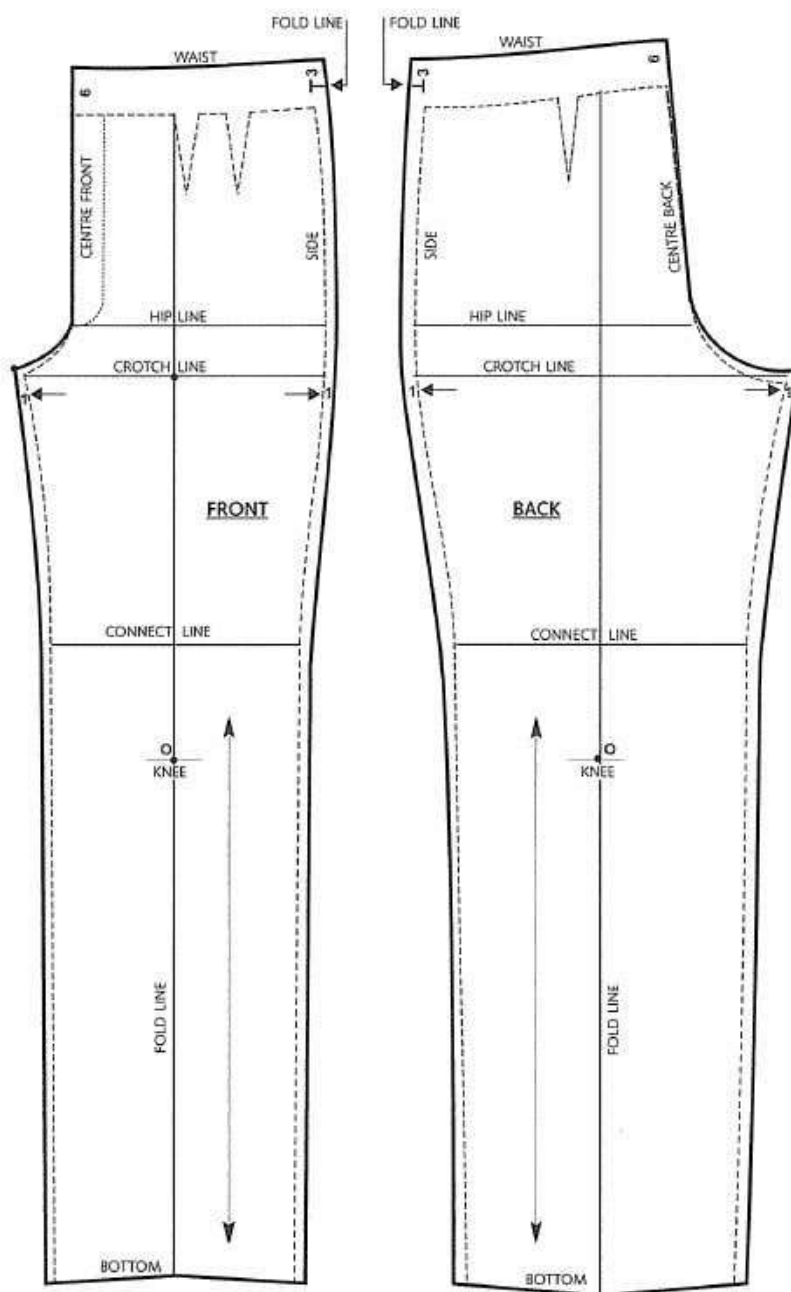


FRONT FLY

Measurements: - Hip circumf. 92 + 2-4 cm ease.
- Waist circumf. 68 + 1-2 cm ease. - Hip height 20 cm.
- Body rise 24 cm. - Trouser length 105 cm.

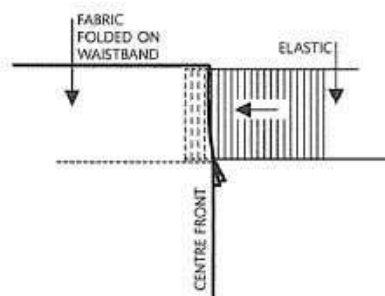
- Draw the basic trousers with darts.
- Raise the front and back waist points A-A1 by 5-7 cm, or as required by the style, and mark the point A3.
- Reduce the centre back rise A1-A2 to 0.5 cm.
- Draw the higher waistline front and back A3 B2, widened in the back by 1.2 cm, and by 0.6 cm in the front (or made to measure).
- Extend the central lines of the darts and make new darts in the opposite direction, on both the front and back.
- Copy the extension of the waist point, down to 3 cm below the waistline, to make the inner facing.
- Close the darts and connect accordingly.
- Draw the extension of the centre front for the zip.

PANTS WITH ELASTICIZED WAIST

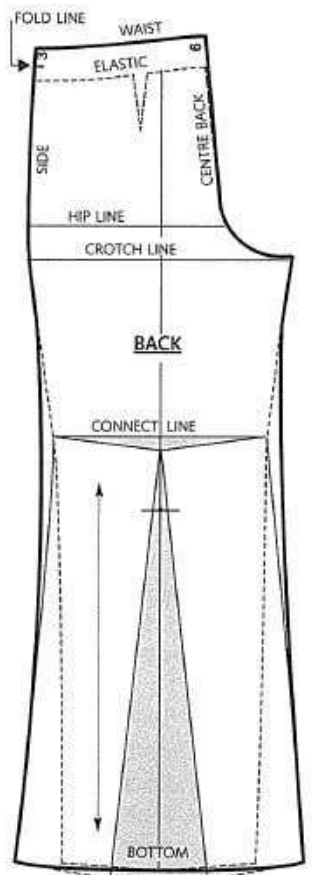
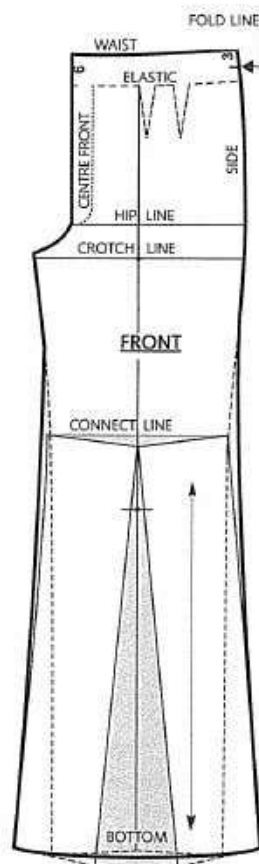
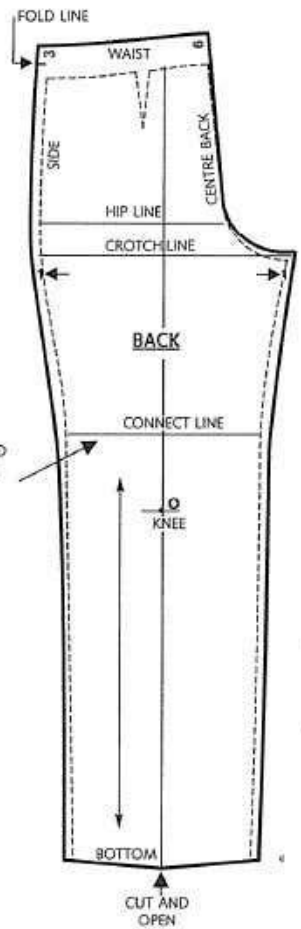
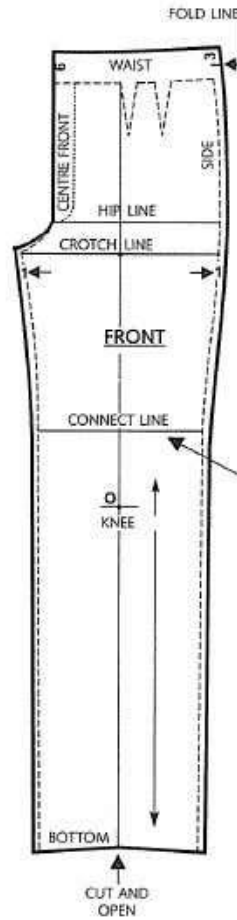
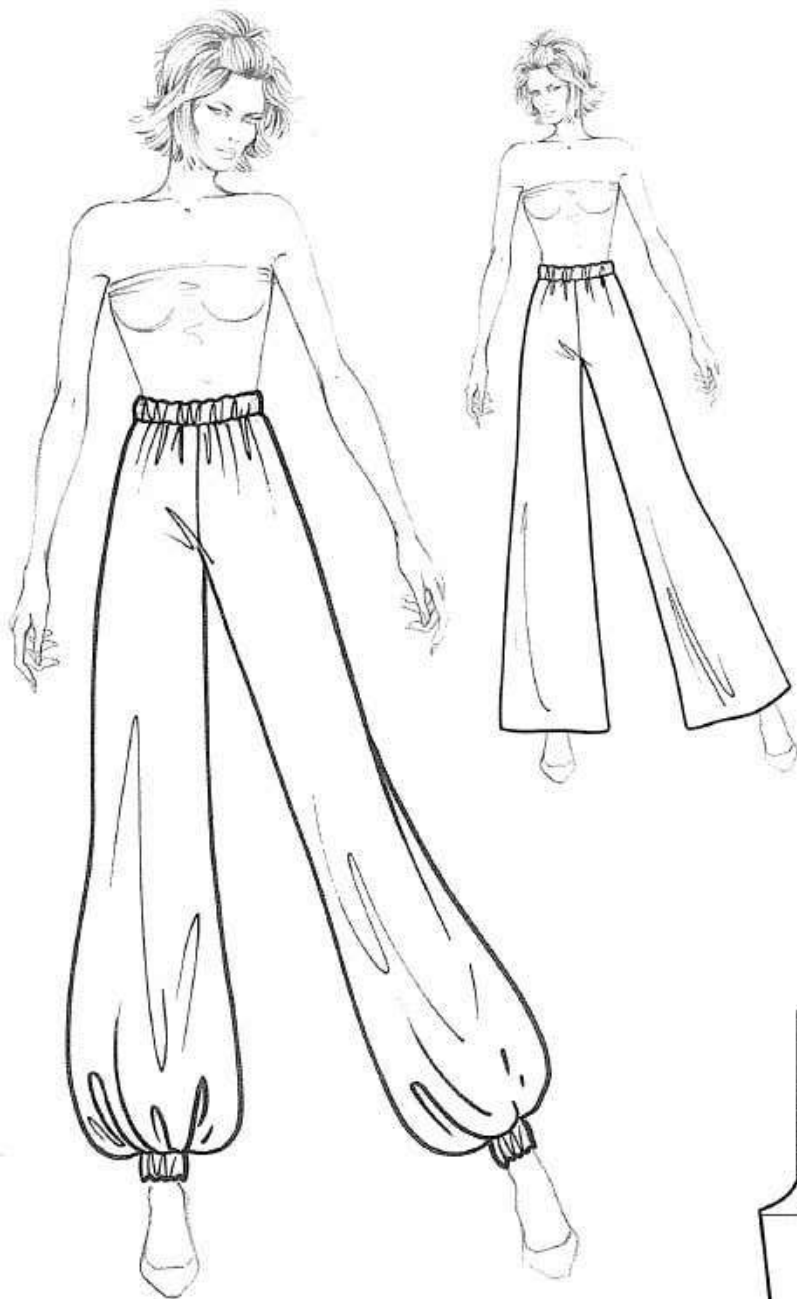


Measurements: - Hip circumf. $92 + 2-4$ cm ease. - Waist circumf. $68 + 1-2$ cm ease. - Hip height 20 cm. - Body rise 24 cm. - Trouser length 105 cm.

- Make the basic trousers with darts.
- Raise the waist point by 6 cm to hold an elastic 2.5 cm high and about 4 cm shorter than the waist circumference (or more, depending on the softness of the elastic).
- Change the pattern outline as shown in the figure, for greater ease and comfort in dressing and undressing.

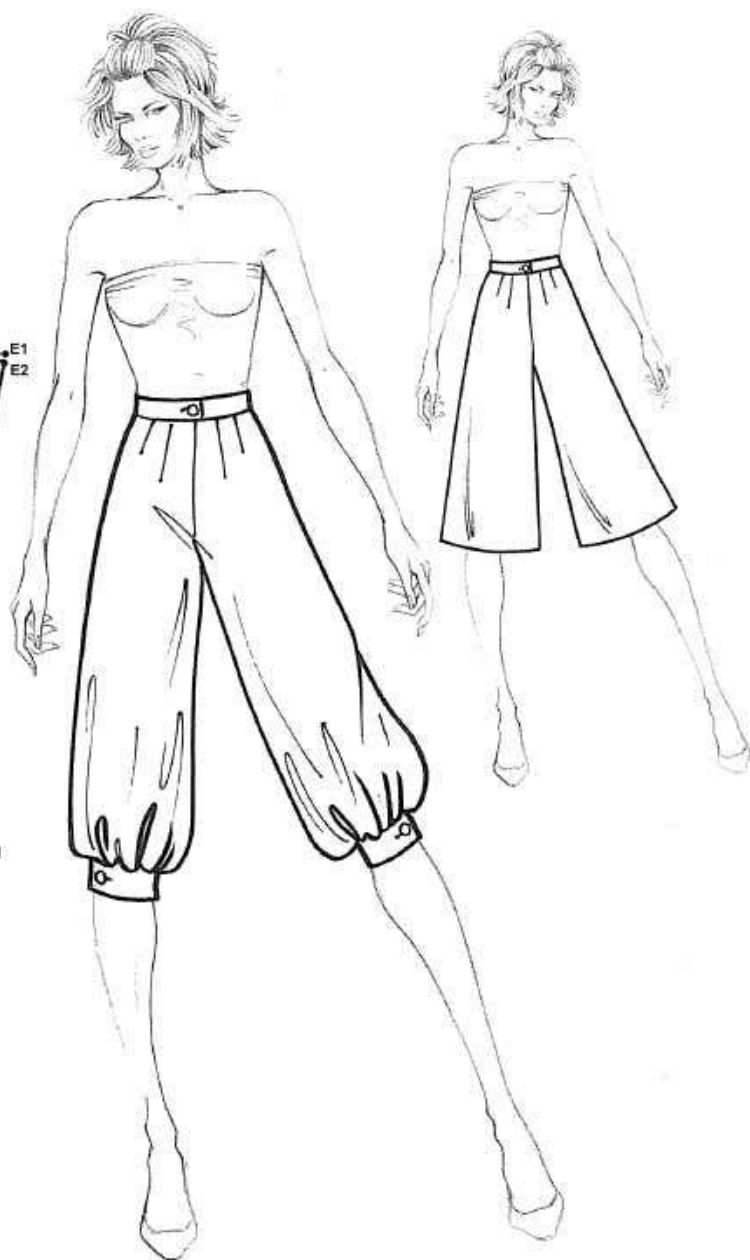
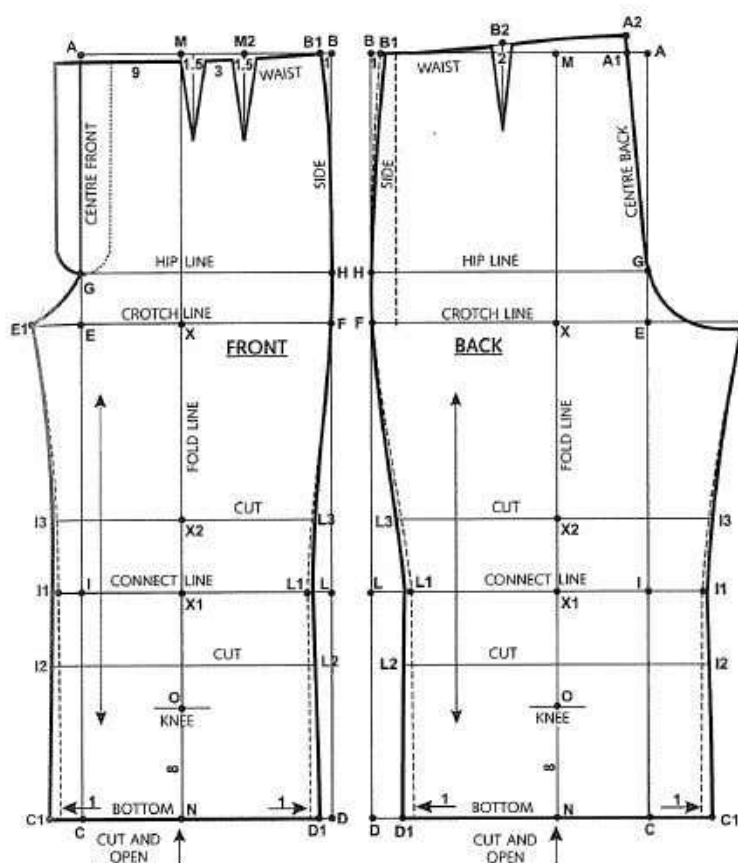


FLARED HAREM PANTS



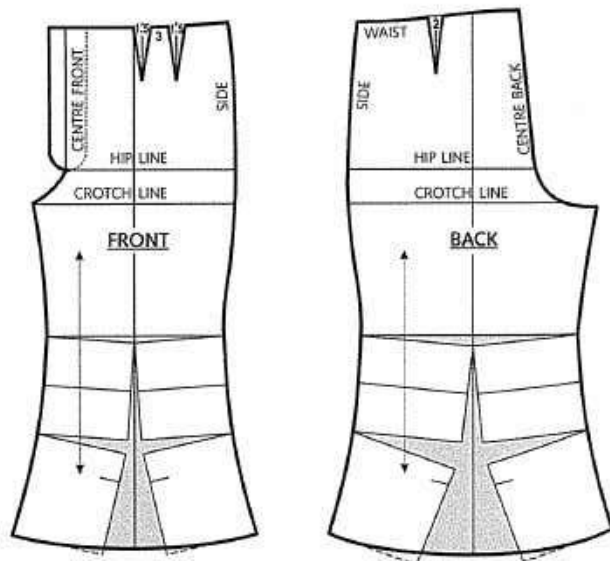
- Make the pants with elasticized waist basic block.
- Slash along the connect line and the fold line starting from bottom and extend as desired.
- Connect the bottom and the other lines accordingly.

PLUS FOURS OR KNICKERBOCKERS

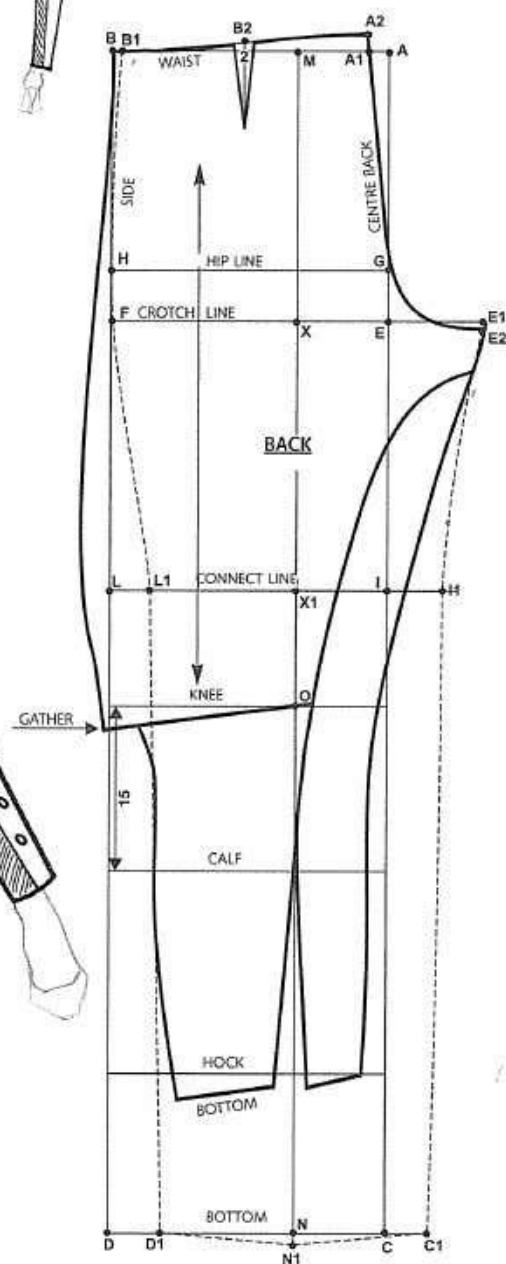
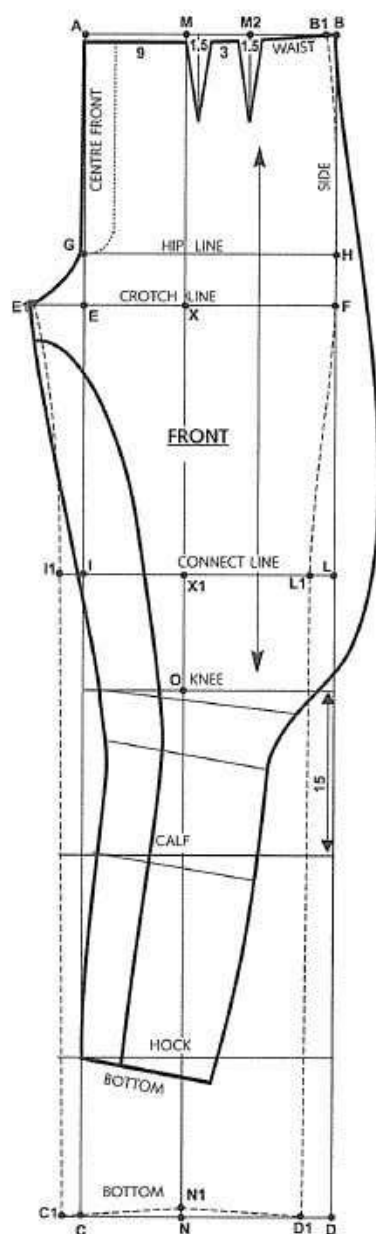
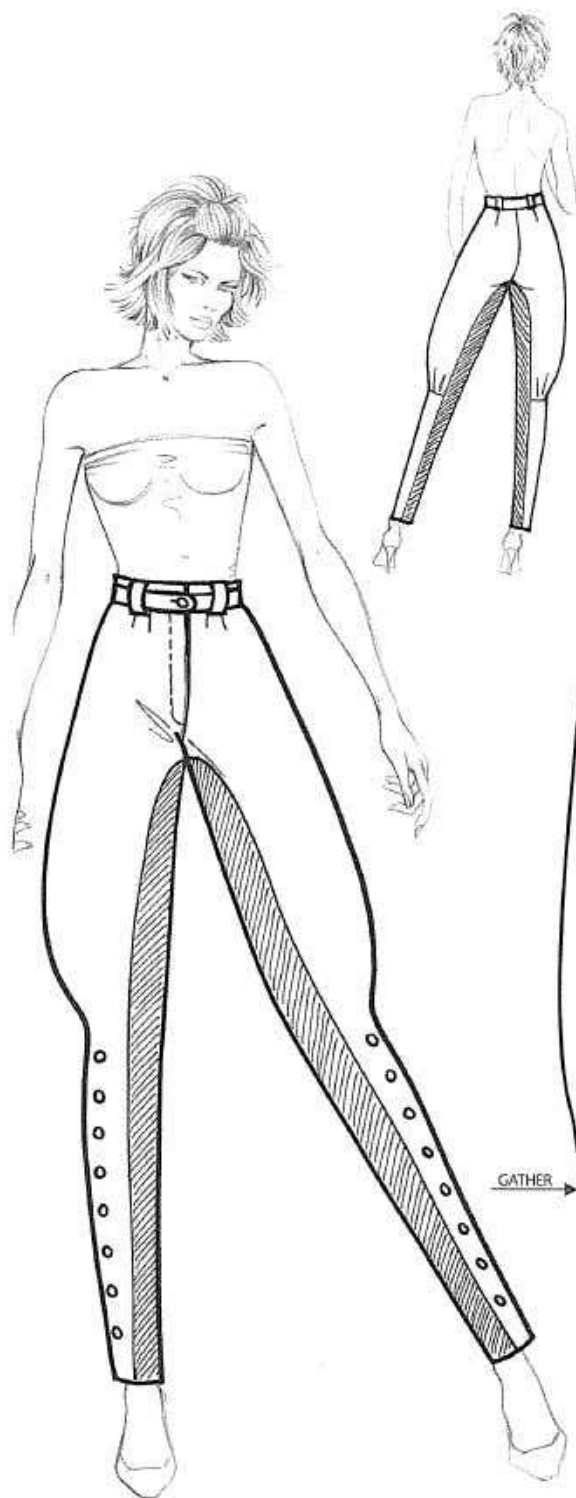


Measurements: - Hip circumf. $92 + 2-4$ cm ease. - Waist circumf. $68 + 1-2$ cm ease. - Hip height 20 cm. - Body rise 24 cm. - Trouser length 105 cm.

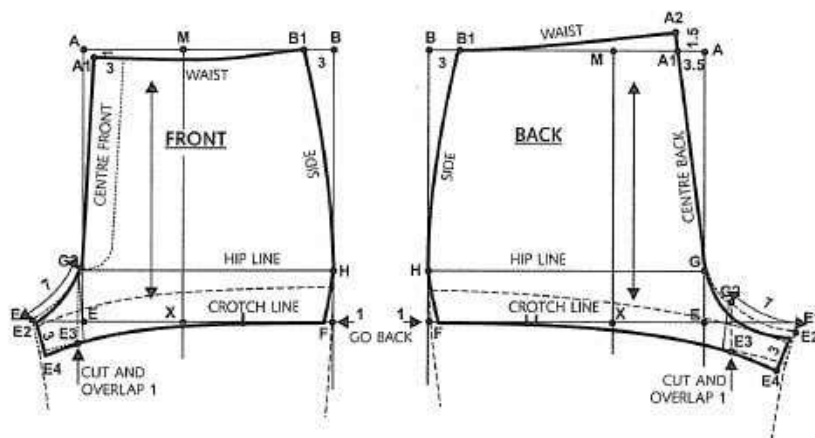
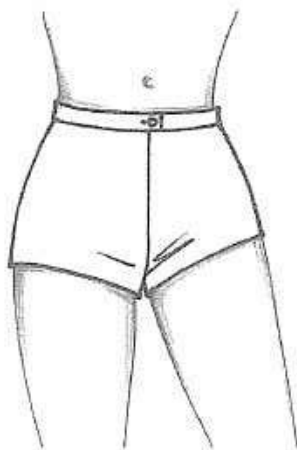
- Draw the basic trousers with darts.
- Shorten the length to 6-8 cm from the knee line.
- Widen the hemline by 1 cm per side, both in front and in back.
- Mark at 10 cm from the connect line, I2-L2 and I3-L3 above and below.
- Cut the fold line from N to X2 and the lines I2-L2 and I3-L3 and spread open as illustrated.
- Measure the part below the knee, add the 4-cm extension for the buttonhole and the button, and draw the knee band.



JODHPUR PANTS

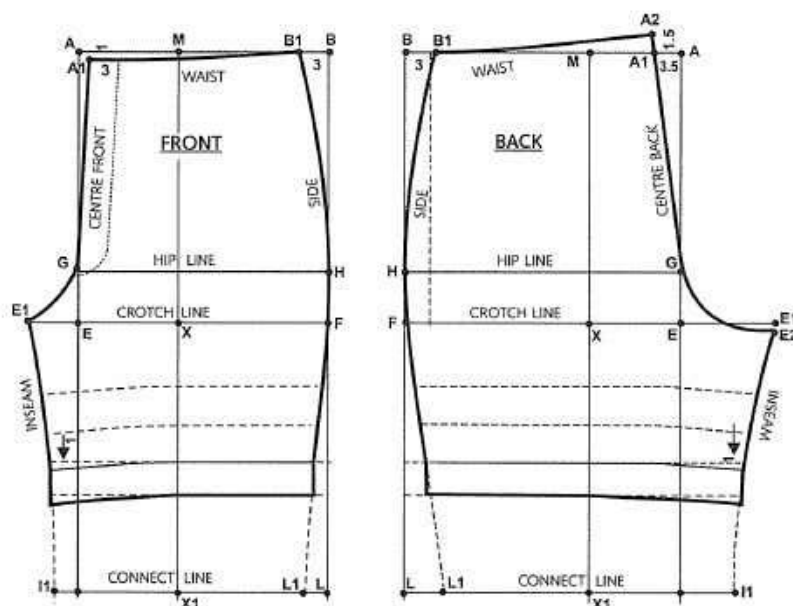
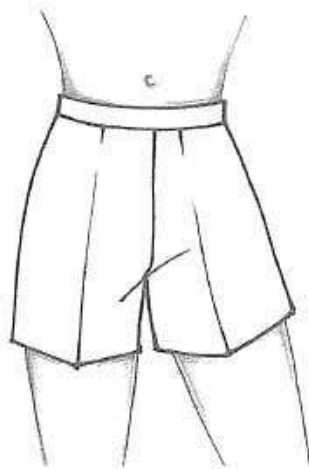
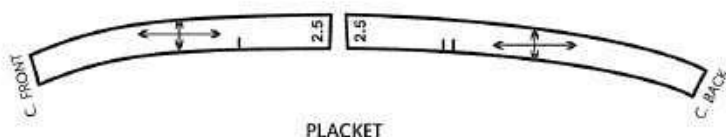


SHORTS PANTS AND SHORT SHORTS



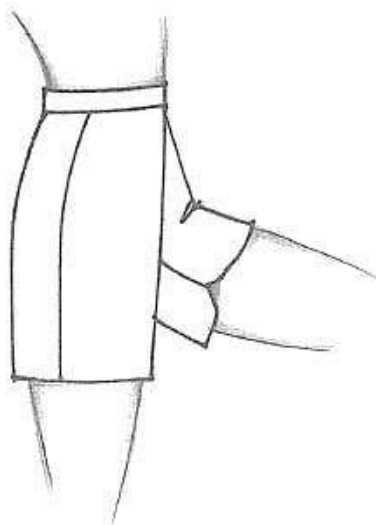
SHORT SHORTS

- Make the basic trousers without darts.
- At 7 cm from the tip of the crotch line, draw the vertical G2-E3.
- Slash along the line from the point E2 and close 1 cm overlapping the parts.
- Move the point F 1 cm inwards.
- Make the extension for the hemline, or draw the hem facing as shown in the figure.
- Correct the curves.



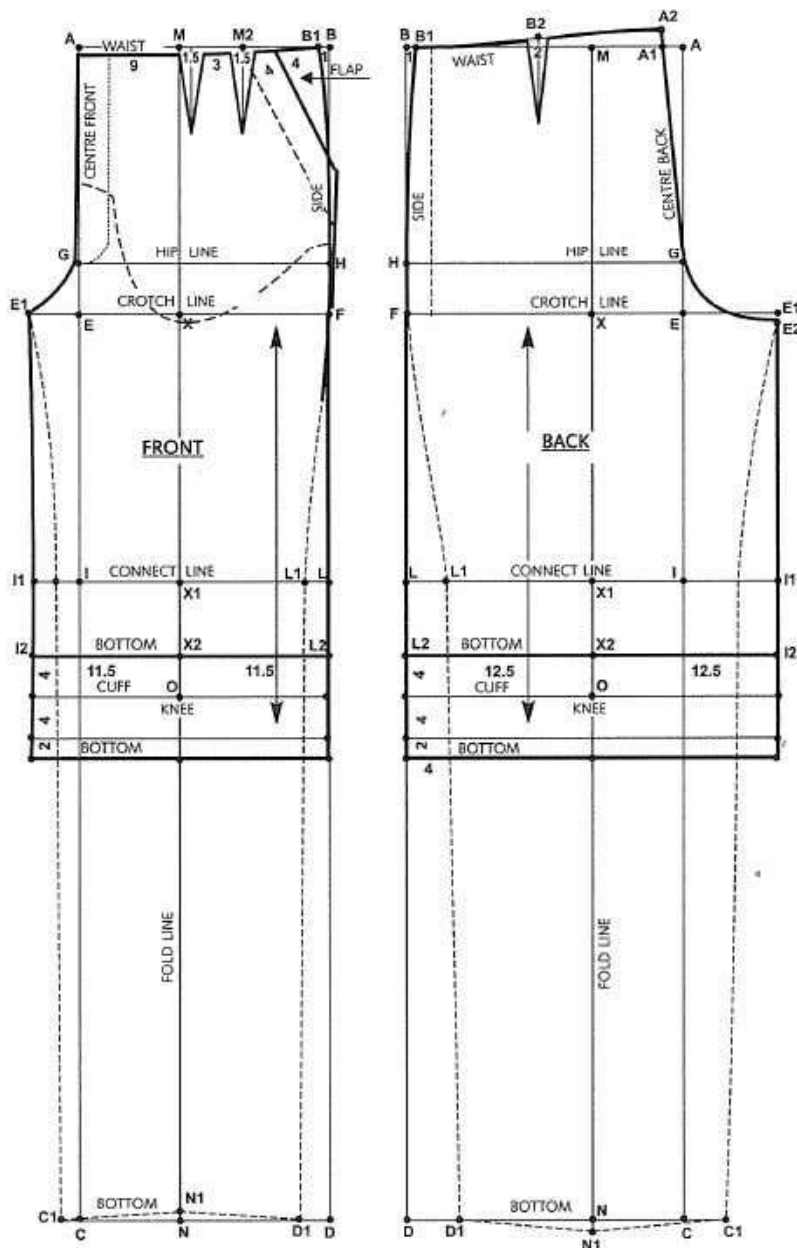
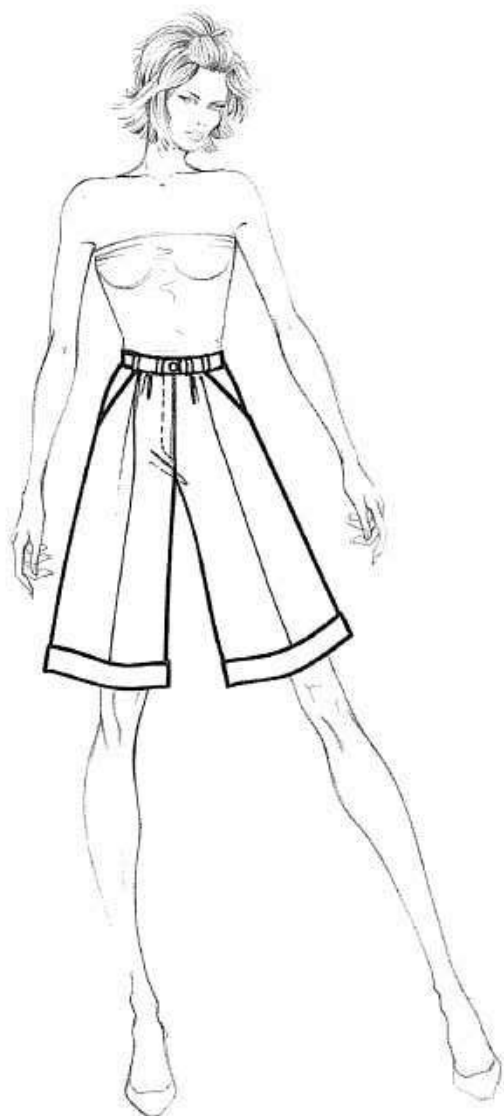
SHORTS PANTS

- Make the basic trousers without darts and applying the desired length.
- Move the bottom edge of the front and back inseam in by 0.6 cm and drop down 1 cm.
- Move the bottom edge of the front and back side seams in 1 cm.
- Make the extension for the hem and connect the curves.

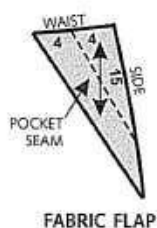


Note: To prevent the formation of a hollow on the inner part of the leg, add 1 cm to the inseam-hem. This ensures that the hem meets the curved area of the inseam with an opening more like a right angle (as shown in the pattern).

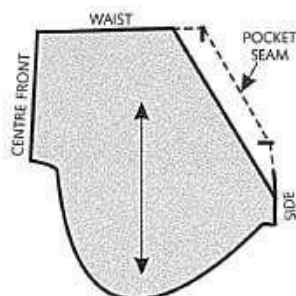
BERMUDAS



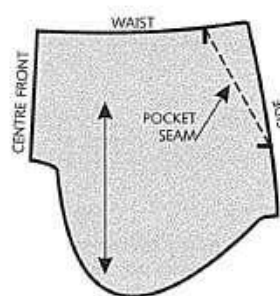
- Make the basic trousers with darts.
- Draw the desired length above the knee X2.
- Front X2-L2, 11.5 cm, or as desired.
- Front X2-I2, like X2-L2.
- Back X2-L2, 1 cm wider than the front (12.5 cm).
- Back X2-I2, like X2-L2.
- Make the extension for the cuff.
- Correct the hemline.



FABRIC FLAP



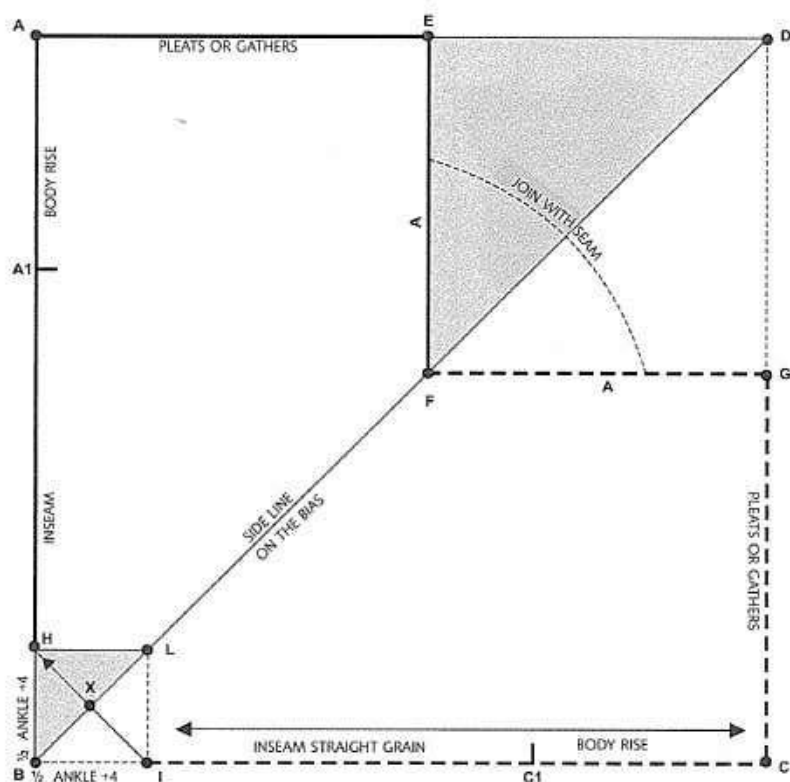
SMALL POCKET POUCH



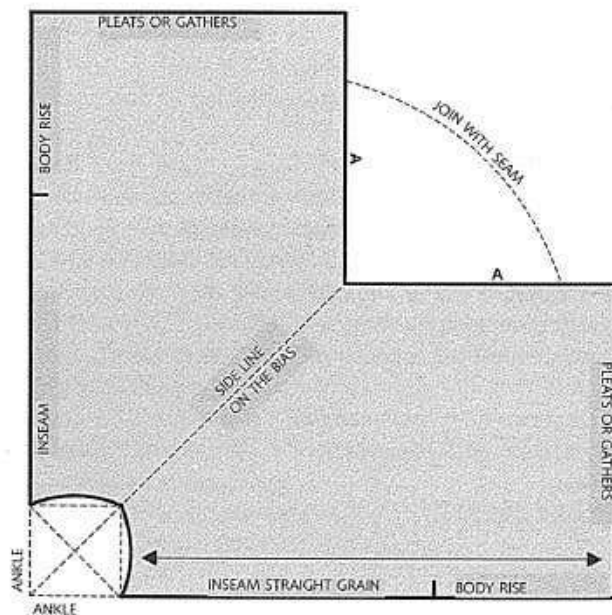
LARGE POCKET POUCH

TURKISH

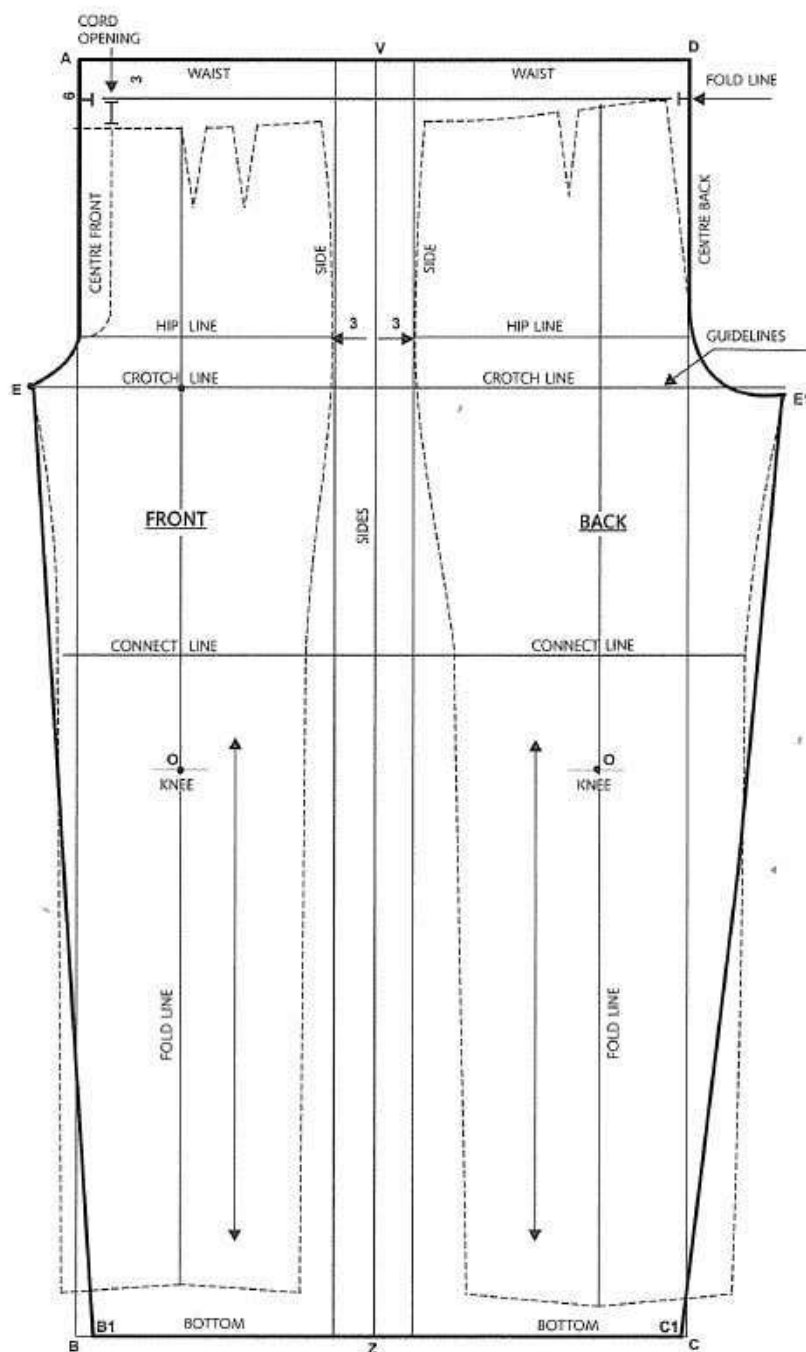
ORIENTAL STYLE DRAPED GEOMETRIC PANTS



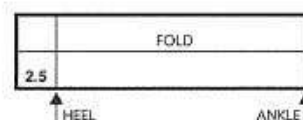
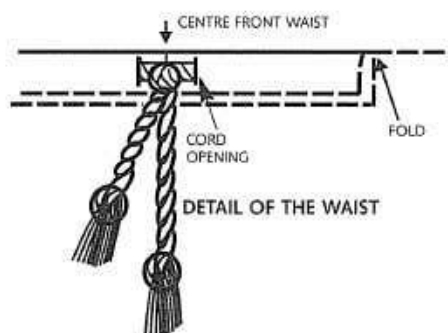
- Draw the right angle A-B-C.
- B-H equals circumference ankle + 2-4 cm.
- B-I like B-H.
- H-A1 inseam.
- A1-A Body rise + 4 or 5 cm (e.g.: 24 + 5 = 29 cm).
- I-C1 like H-A1.
- C1-C like A1-A.
- C-D parallel and equal to B-A.
- A-D parallel and equal to B-C.
- Draw the diagonal B-D (internal leg fold line).
- Laying the internal leg fold line on double fabric.



BASIC DRAWSTRING PANTS BLOCK



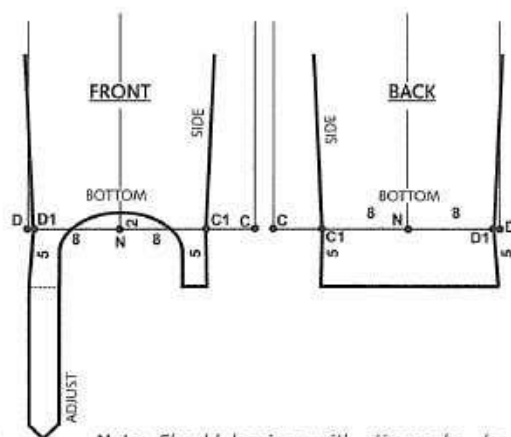
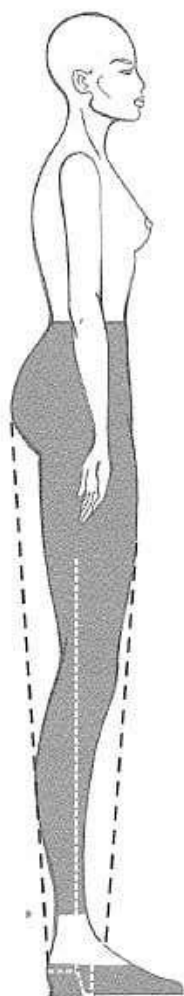
- Draw a rectangle A-B-C-D, where A-B is the trousers length + 6 cm and A-D is the hip circumference + 6 cm.
- A-V equals half A-D. Draw V-Z.
- Position the pants block in this rectangle, taking the crotch line as our guide, keeping a distance of 3 cm between the side lines and the V-Z line, and a distance of 3-3.50 cm between the back waistline and A-D.
- Extend centre front and centre back lines to the line A-D.
- Z-B1 bottom front measurement + 3 cm.
- Z-C1 bottom back measurement + 3 cm, for fullness.
- Add E-B1 and E1-C1.



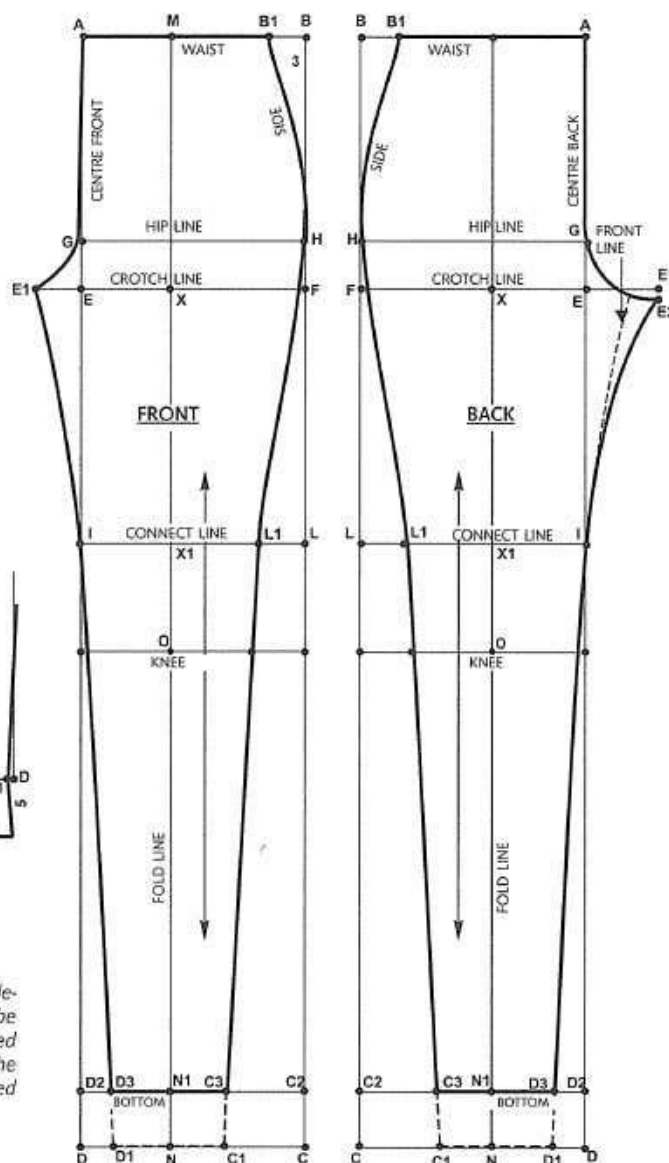
ANKLE BAND

Note: The pattern can be laid out as is or separating the back from the front, in which case the side seam is needed for the zipper or other.

BASIC LEGGINGS BLOCK



Note: Should leggings with stirrups be desired, the knee and the bottom hem must be made wider, and in the front the rounded shape must be drawn, along with, in the back, the extension for the heel, illustrated above.



Size S measurements: Hip circumference 92 cm. – Waist circumference 68 cm. – Hip height 20 cm. – Body rise 24 cm. – Trouser length 105 cm.

Front

- Draw a rectangle A-B-C-D, with:
- A-B equal to $\frac{1}{4}$ Hip circumf. minus 1-2 cm (e.g.: 92: 4 = 23 - 2 = 21 cm).
- B-C = Total length (e.g.: 105 cm).
- A-E equals the Body rise minus 1 cm (e.g.: 24 - 1 = 23 cm).
- B-F like A-E.
- E-E1 equals $\frac{1}{16}$ of the hip circumference minus 2 cm (e.g.: 92: 16 = 5.7 - 2 = 3.7 cm).
- A-G the measurement of the Hip height minus 1 cm (e.g.: 20 - 1 = 19 cm).
- Draw G-H (Hips).
- E1 is like AE.
- Draw I-L.
- E1-X is half of E1-F.
- Draw M-N intersecting at X, and write FOLD LINE and STRAIGHT OF GRAIN

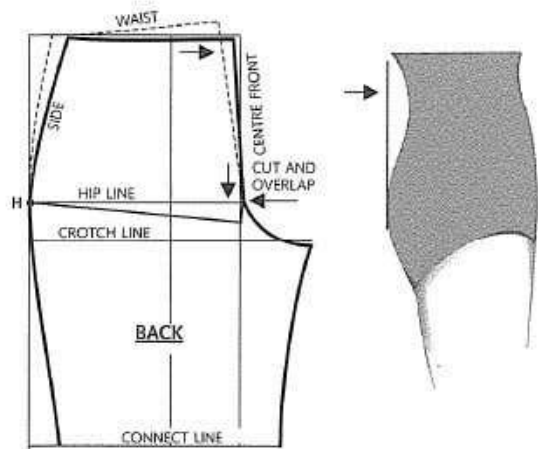
- M-O Knee height (e.g.: 60 cm).
- A-B1 is $\frac{1}{4}$ the Waist circumference less 0.5 cm (e.g. 68: 4 = 17 - 0.5 = 16.5 cm).
- X1-L1 and X1-I1 is 8 cm (THIGH).
- N-N1 equals 5 cm (or as desired).
- N1-C3 $\frac{1}{4}$ - 0.5 (ANKLE) (e.g.: 22: 4 = 5.5 - 0.5 = 5 cm (or as desired)).
- N1-D3 is like N1-C3.
- Draw C3-N1-D3 (BOTTOM).
- Draw E1-G-A.
- Draw E1-I-C2 accordingly.
- Draw B1-A and write WAIST.
- Draw the curved B1-H-F-L1-C3 run.

Back

Copy exactly the basics for the front, only changing the Crotch Length.

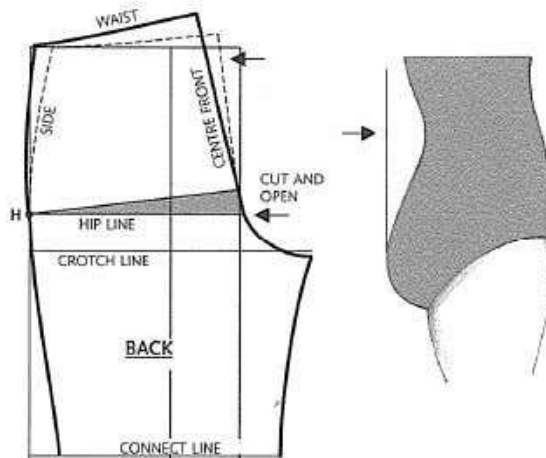
- E-E1 = $\frac{1}{16}$ the circumference of the hips + 1 cm (e.g.: 92: 16 = 5.7 + 1 = 6.7 cm).

CORRECTING FIGURE PROBLEMS FOR PANTS



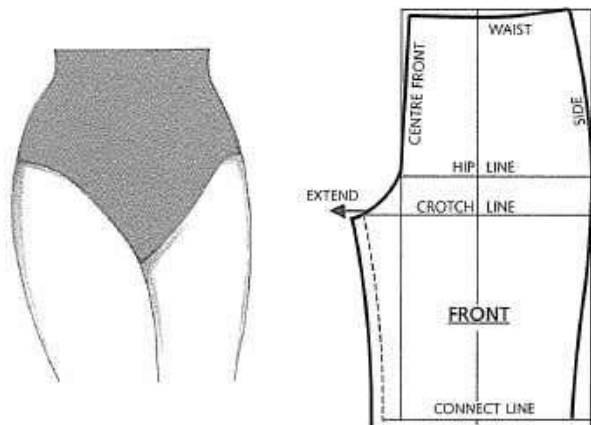
FLAT BOTTOM

- Cut the pattern along the hip line, starting from the centre back, and rotate the upper part as needed, pivoting on vertex H and overlapping the lower part.
- Double-check the measurements and connect all the lines nicely.



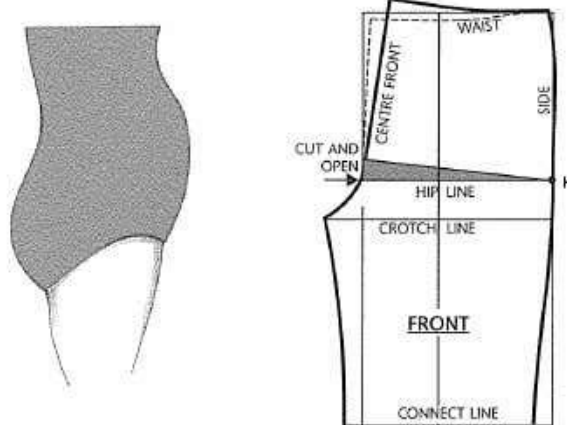
FULL BOTTOM

- Cut the pattern along the hip line, starting from the centre back, and rotate the top part upwards, opening to the desired measure, pivoting on vertex H.
- Lengthen the tip of the crotch by 1-1.5 cm; check and connect all the lines nicely.



THIGH BULGE IN FRONT

- Add 1-1.5 cm to the front inseam and join the lines.



LARGE ABDOMEN

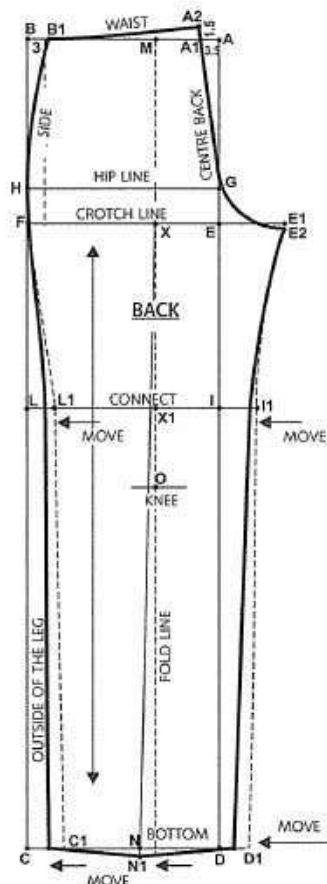
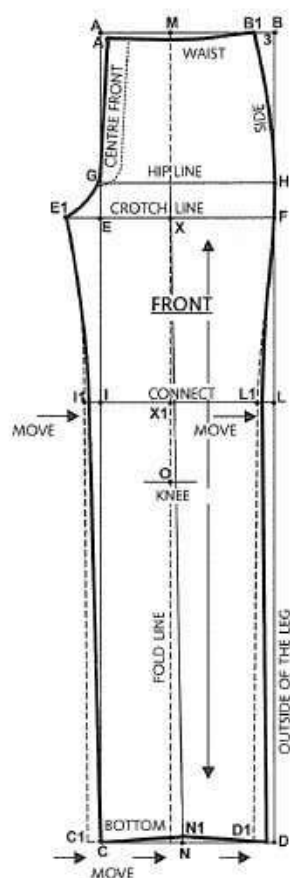
- Cut the paper pattern along the Hip line, starting from the centre front, and rotate the top part upwards, opening it as needed, pivoting on vertex H.
- Double check and finish the lines nicely.



GENU VALGUM

With this shape, the basic block is corrected by moving the seat's centre of gravity outwards, starting from the thighs.

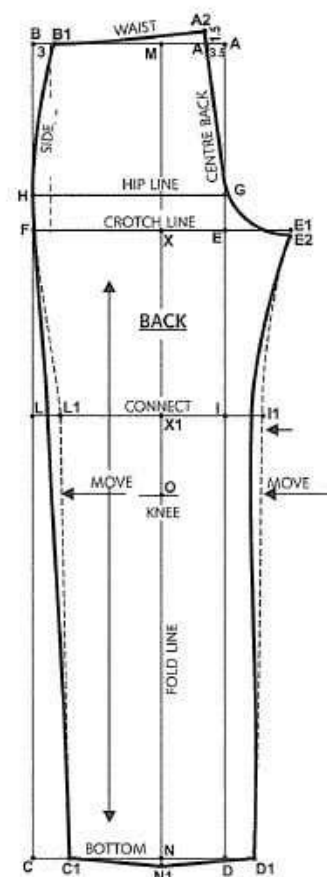
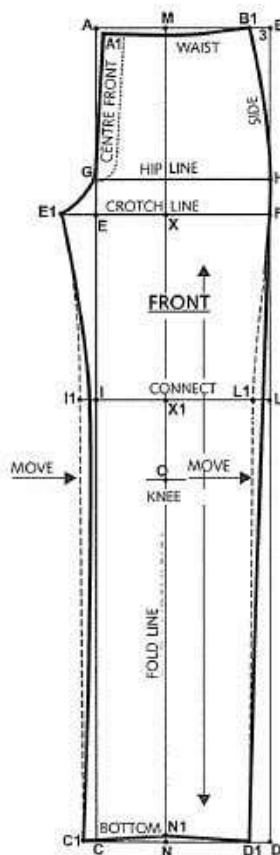
- Move point N on the front as well as the back toward the outside of the leg, as required (2 cm).
- Move points C1 and D1 the same distance, and nicely connect the outside and the inside of the legs and the hem.



BOW LEGS

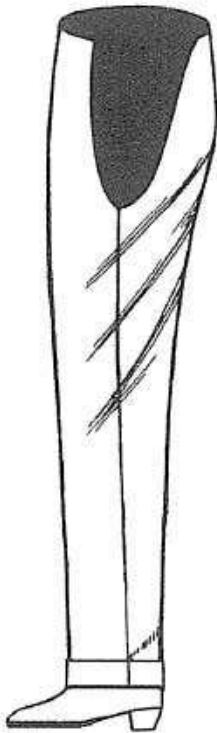
To correct for this problem in the basic block, it may be enough to move points I1 and L1 as needed and then trace the lines.

If the bowing is more accentuated, proceed as with the previous defect, but reversed.



WHEN TROUSERS ARE OFF GRAIN

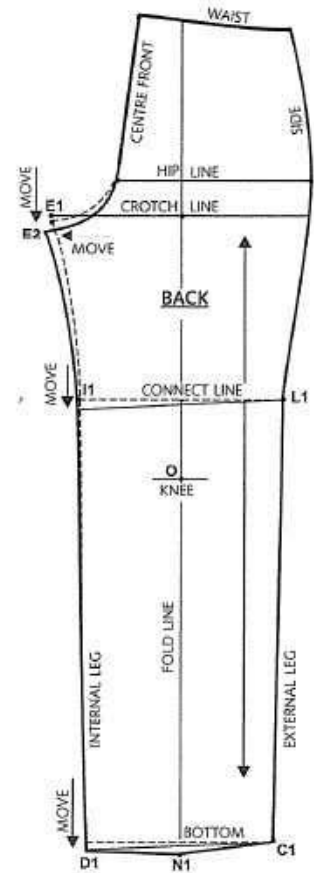
SHORT IN BACK



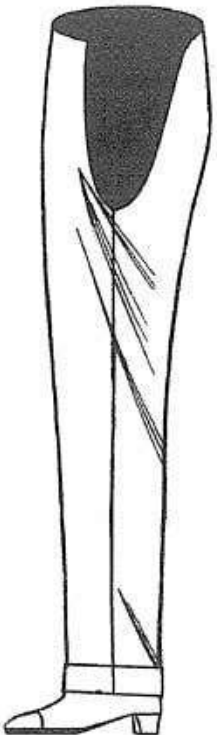
Trousers with this defect show wrinkles that stretch obliquely from the knee to the fullest part of the hips, only along the inseam.

The wrinkle tends to twist back, especially when you sit down.

The defect can be corrected by lengthening and dropping the seat as needed, as, as a result, reshaping the entire inner part of the leg, restoring it to its proper measurements, as illustrated in the figure.



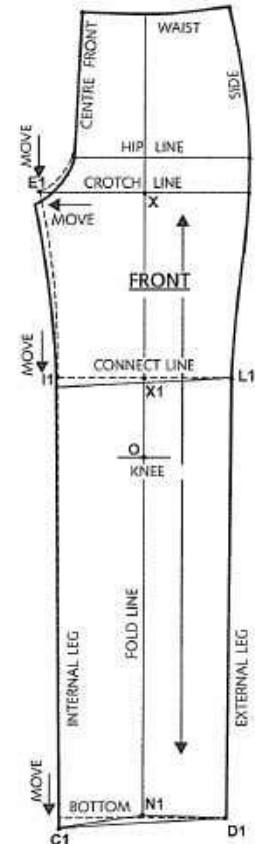
SHORT IN FRONT



Trousers with this defect show wrinkles that stretch obliquely from the front crotch to the inner part of the calf, where they cling.

The wrinkle tends to twist outward, even when walking.

The defect can be corrected, as above, by lengthening and dropping the seat as needed, and, as a result, reshaping the entire inner part of the leg, restoring it to its proper measurements, as illustrated in the figure.



THE POCKETS

Pockets can be applied to the garment and are intended to hold various small personal items, or they serve a purely decorative purpose.

Pockets appeared for the first time in around 1500, applied internally to men's pants.

In 1700, we find them both in the front and on the back of tailcoats, placed horizontally with shaped flaps and buttons.

Pockets can be of different sizes and shapes, but they must always have a minimum width equal to that of the outspread hand, plus 2.5–5 cm and a real length equalling about that of the hand, but in any case in proportion to the individual's figure and the style of garment. The placement of the pocket

must serve a decorative as well as functional purpose, convenient for the arm and hand, easily accessible.

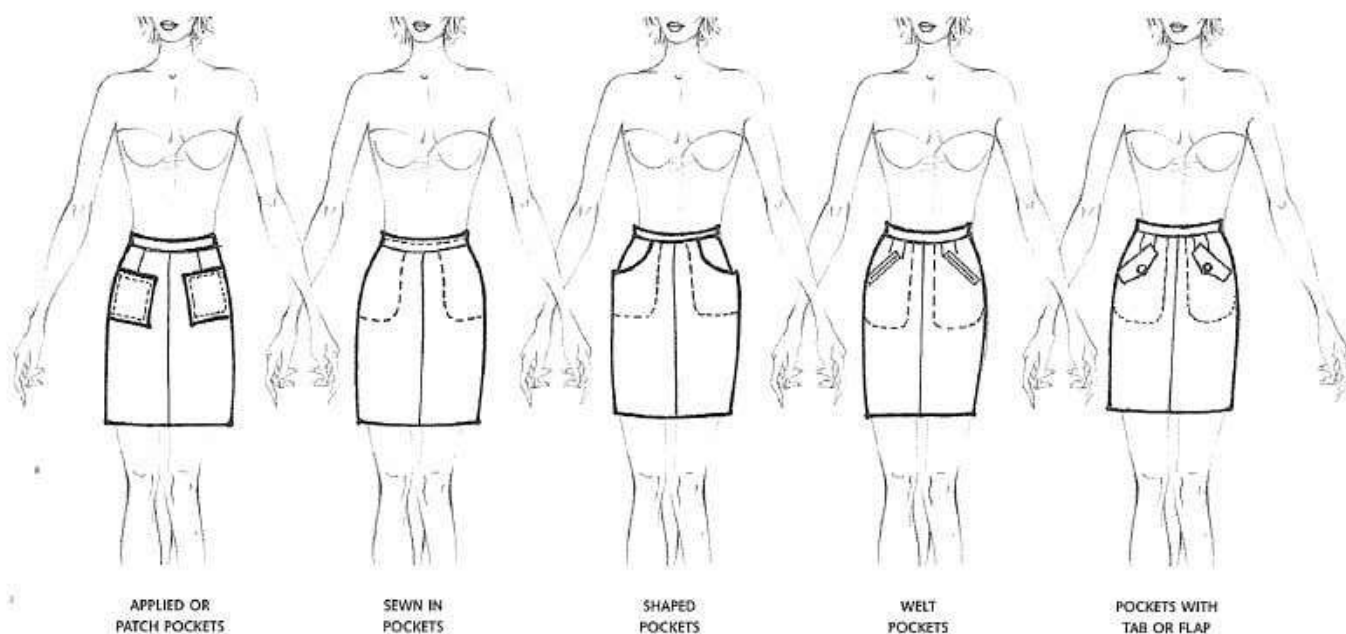
To establish the pocket's placement, hold the arm straight by the sides, mark the elbow height and position the pocket opening about 5 cm below this point.

There are essentially two kinds of pocket:

External and internal.

External pockets may be: appliqué or patch style; pouch pockets; cargo pockets; profiled pockets; with flap or tab.

Internal pockets can be: sewn in; shaped; welted; with tab or flap.



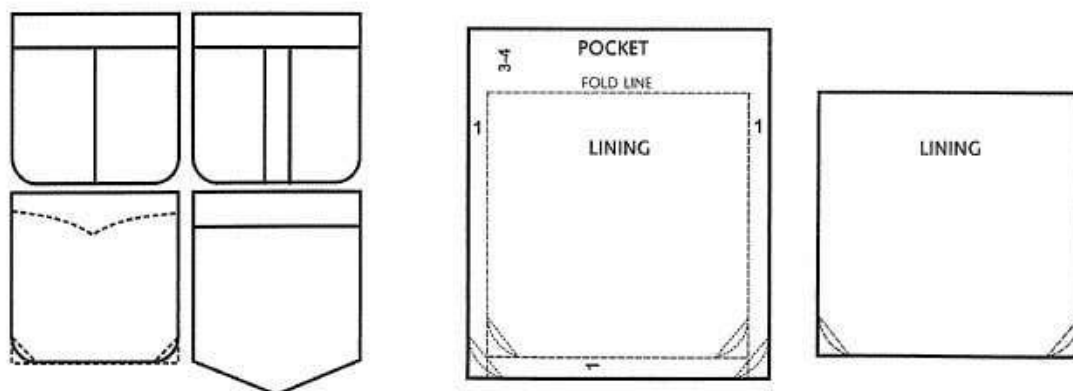
APPLIED OR PATCH POCKETS

Patch pockets can have a number of different forms and they are applied to the exterior of the garment.

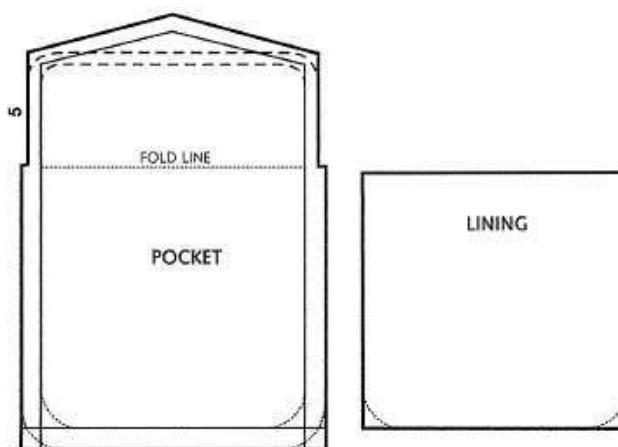
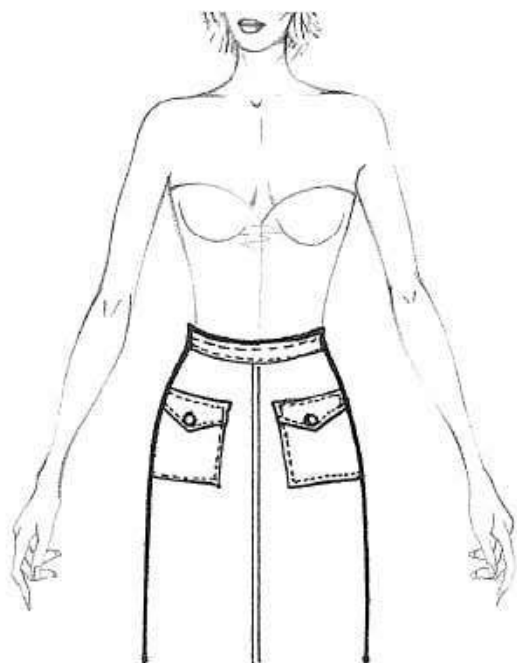
The upper part should have an extension of 3–4 cm, turned towards the inside, so the lining remains unseen.

One cm should be added to the pattern and turned toward the inside and ironed, before sewing the pocket.

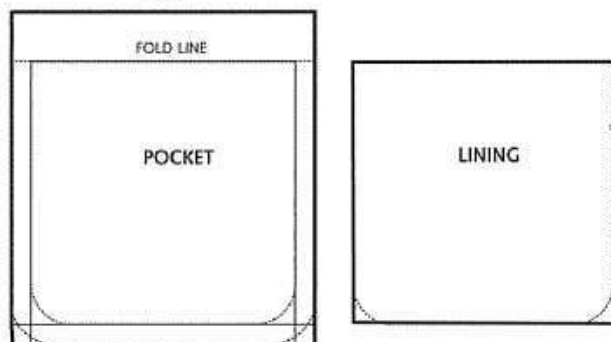
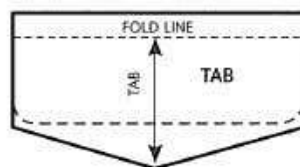
The lining should be about 3 millimetres smaller than the pocket.



APPLIED POCKET WITH FLAP OR TAB



POCKET WITH CUT TAB ALL IN ONE

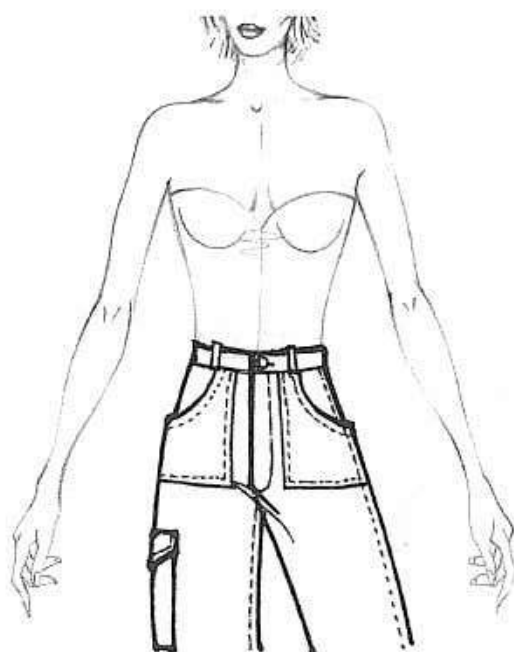


POCKET WITH DETACHED TAB

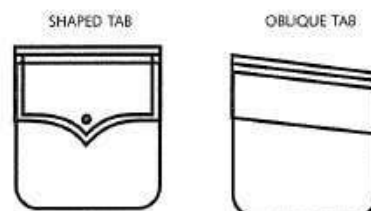
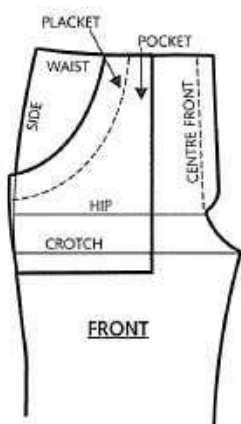
Applied pockets can have a flap or a tab directly attached to the pocket or detached and sewed separately on to the garment.

When it is attached to the pocket, the pattern should be increased by the size of the tab plus the seam allowance (4-5 + 1 cm).

When, instead, it is detached, it should be drawn separately and applied to the garment after finishing it with the lining or with the double fabric.

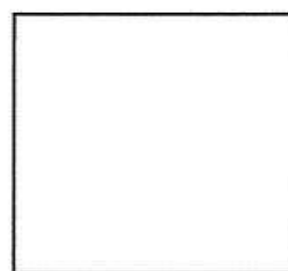
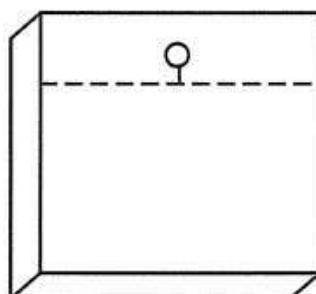
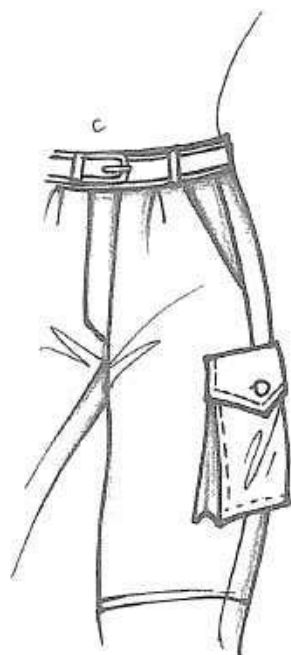


EXTERNAL POCKET



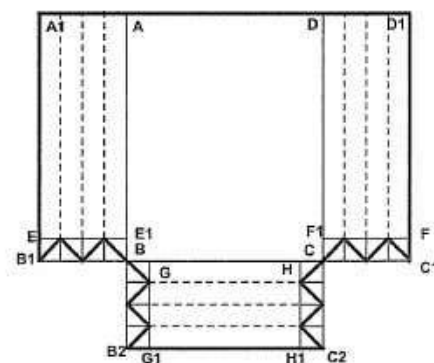
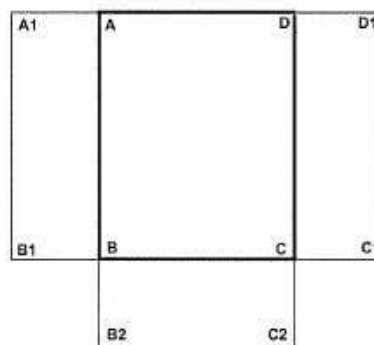
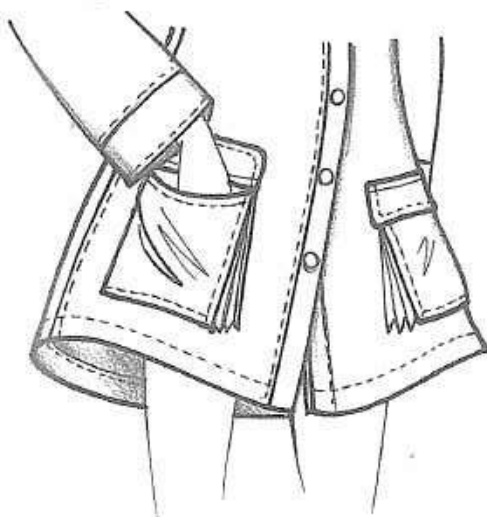
SMALL POCKET

POUCH POCKET



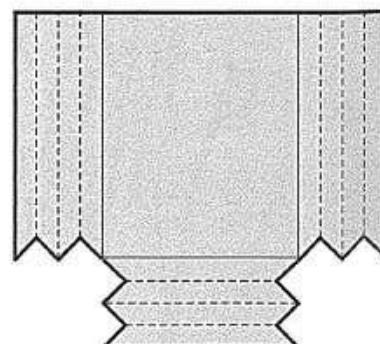
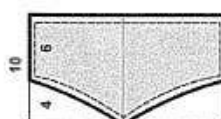
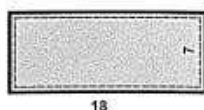
HEM BAND

CARGO OR PLEATED POCKET

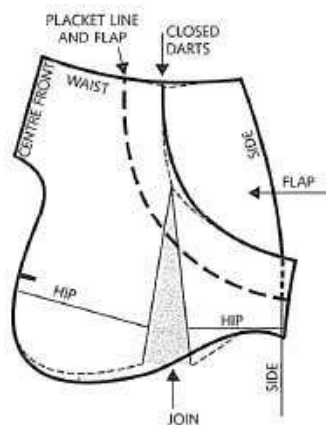
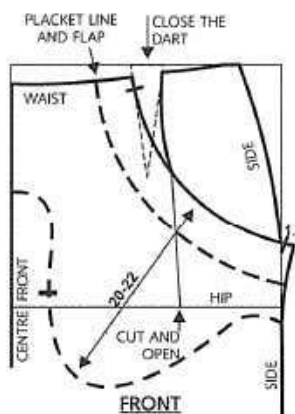
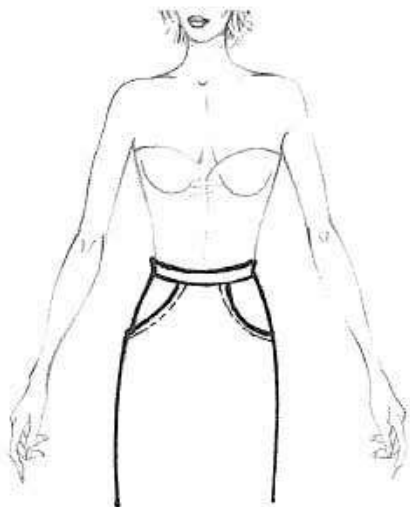


Necessary measurements:

- Pocket's width and length (e.g.: 18 x 22 cm).
- Numbers of the pleats (e.g.: 2 pleats).
- Pleats' depth (e.g.: 2 cm).
- Pleats' distance (e.g.: 3 cm).



SHAPED POCKETS

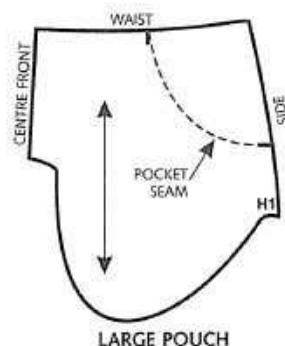
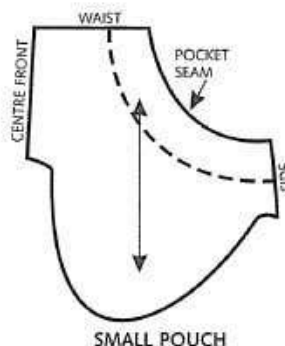
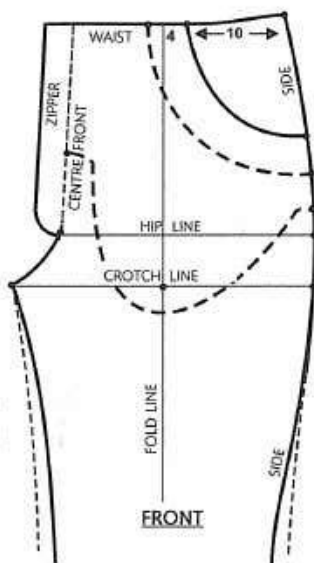
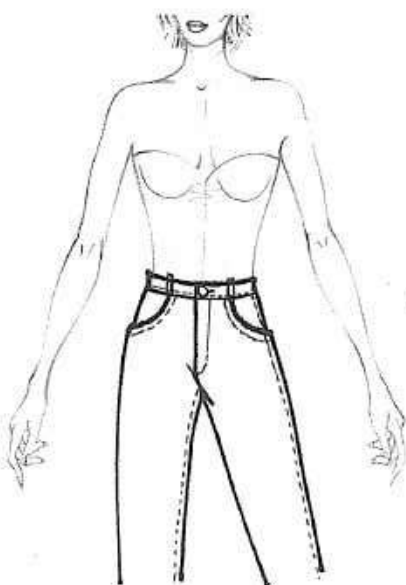
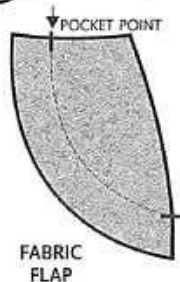
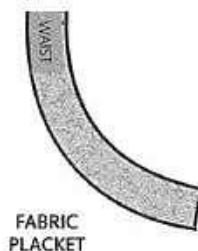
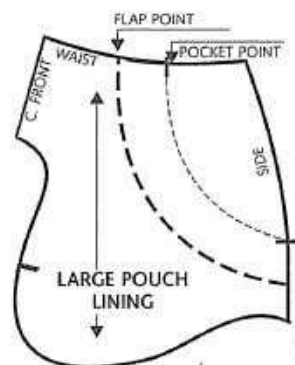
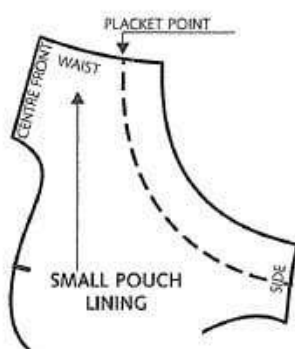


Shaped and inserted pockets have their edges distant from the side seam and they come in various shapes and sizes, creating the effect of a yoke between the seam line and the pocket.

This kind of pocket may be used for skirts, dresses and trousers, and is typical of blue jeans.

The pieces making up these pockets are:

- *Large pouch lining*, which is the inner part of the pocket, over which is sewn the fabric flap.
- *Small pouch lining*, which is the exterior part of the pocket, over which is sewn the fabric placket.
- *The flap*, which must be designed with the internal edge exceeding the pocket line by 3–4 cm, and sewn on the large pouch lining.
- *The placket*, which is applied over the small pouch.
- *The exterior of the garment*, up to the pocket edge.

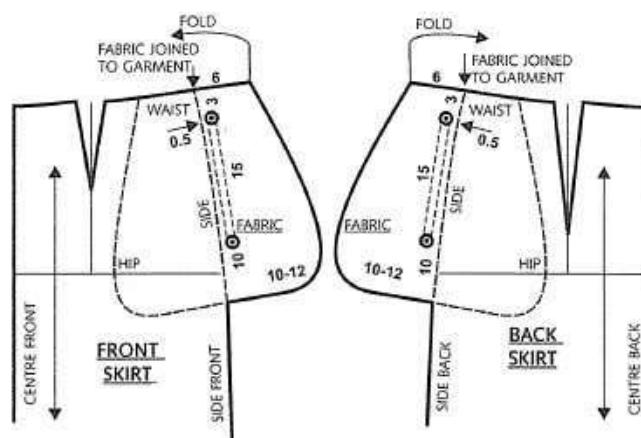
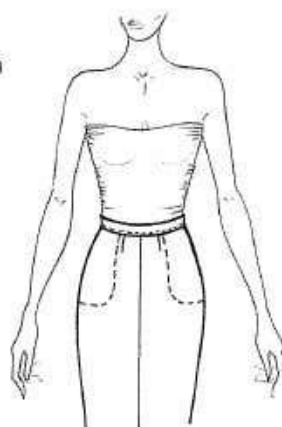


SEWN-IN POCKETS

POCKETS MADE ALONG THE SIDE SEAM

These pockets must be drawn directly on the pattern.

- Draw the outline of the pocket on the side seam, starting from the waist down, with a total height measuring 28–30 cm and width 10–12 cm.
- Draw the 14–16 cm pocket mouth 2.5–3 cm from the waistline.



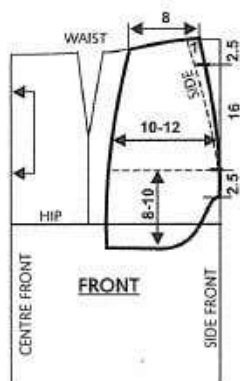
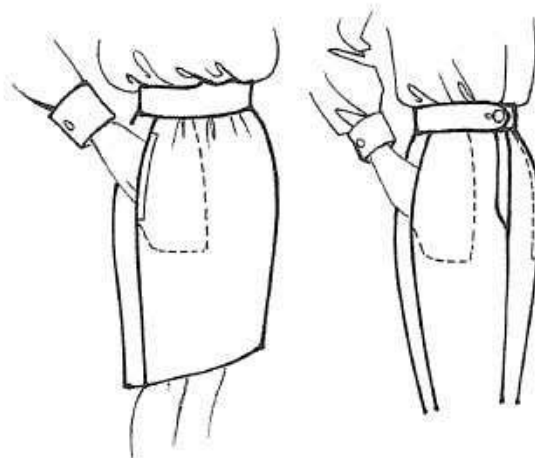
SIDE SEAM POCKETS

SIDE SEAM POCKETS

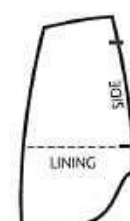
These pockets are directly inserted in the side seam at waist level, or in any other lateral or transversal seam.

The pocket is made up of two pieces sewn together.

So as not to have too much bulk, the pocket can be made of lining fabric; if this is the case, in order not to show the lining, a separate pattern piece (the flap) has to be made, 4–5 cm for the fabric placket, to attach to the lining along the pocket opening.



FRONT

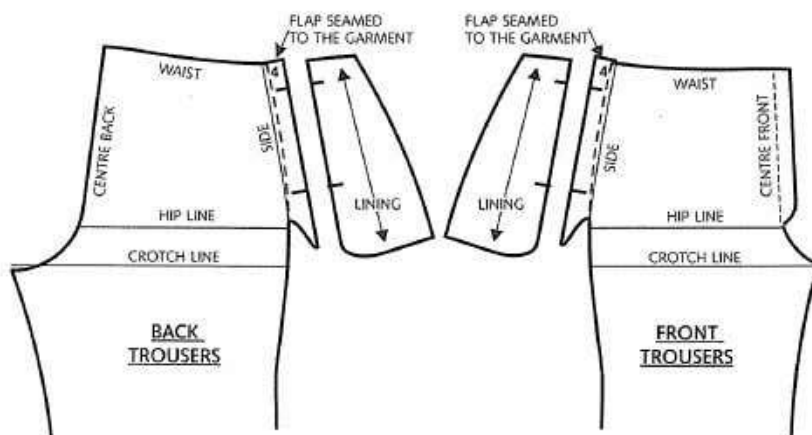


ENTIRE POCKET



POCKET WITH PLACKET (OR FLAP)

A second method is to add a 4–5 cm extension (flap) corresponding to the pocket opening, both in front and in back. In this case, the pattern for the pocket linings must be shorter than the flap, to which they will be sewn after adding the seam allowances.



BACK TROUSERS

FRONT TROUSERS

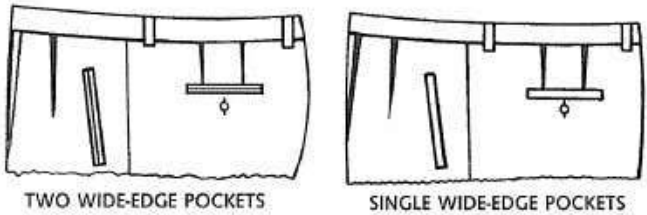
WELT POCKETS

Welt pockets have an opening like a large buttonhole, and they are mainly used for men's trousers' back pockets, skirts, and jacket breast pockets.

Welt pockets can have two edges or just one wide one, with a decorative strip on the opening, with a zipper, and with a tab or flap.

The pocket lining is attached below the opening, and is made up of an inside part closer to the body, and an outer part of the pocket, which lies between the garment and the back of the hand tucked in the pocket.

The pattern for the lining can be made with a single piece, or with two pieces sewn together, as shown in the figures.



TWO WIDE-EDGE POCKETS

SINGLE WIDE-EDGE POCKETS

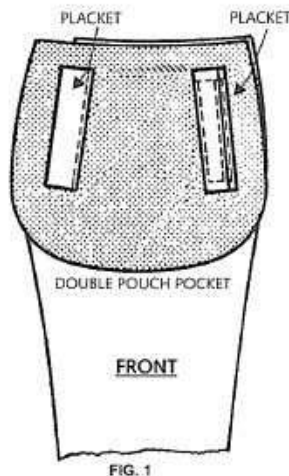
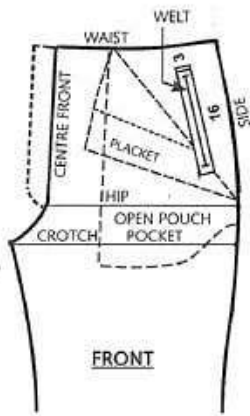


FIG. 1

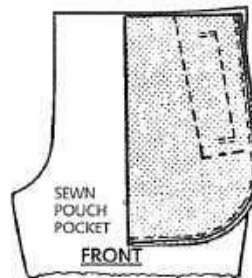
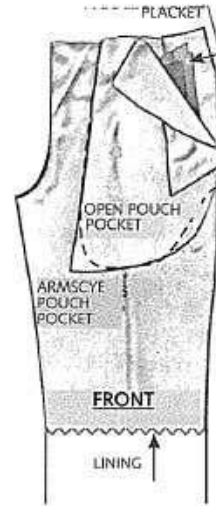


FIG. 2



POCKET LINING
FIG. 3

BACK POCKET TROUSERS

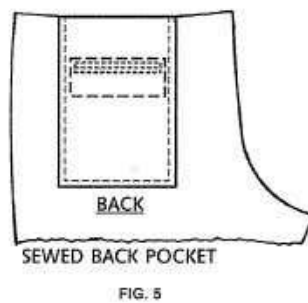
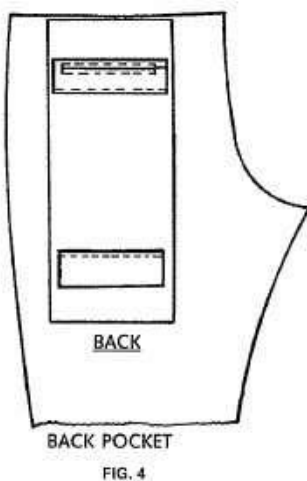
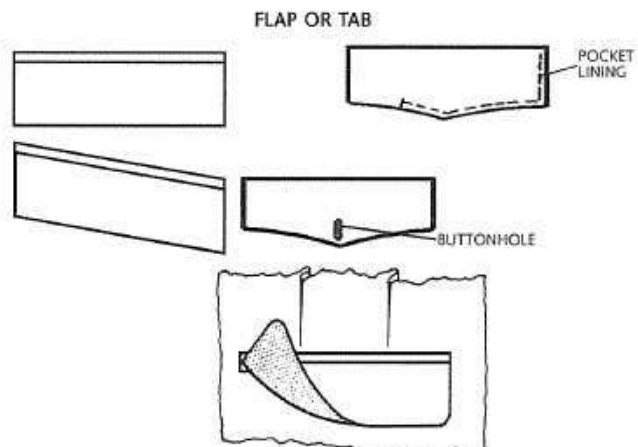


FIG. 5

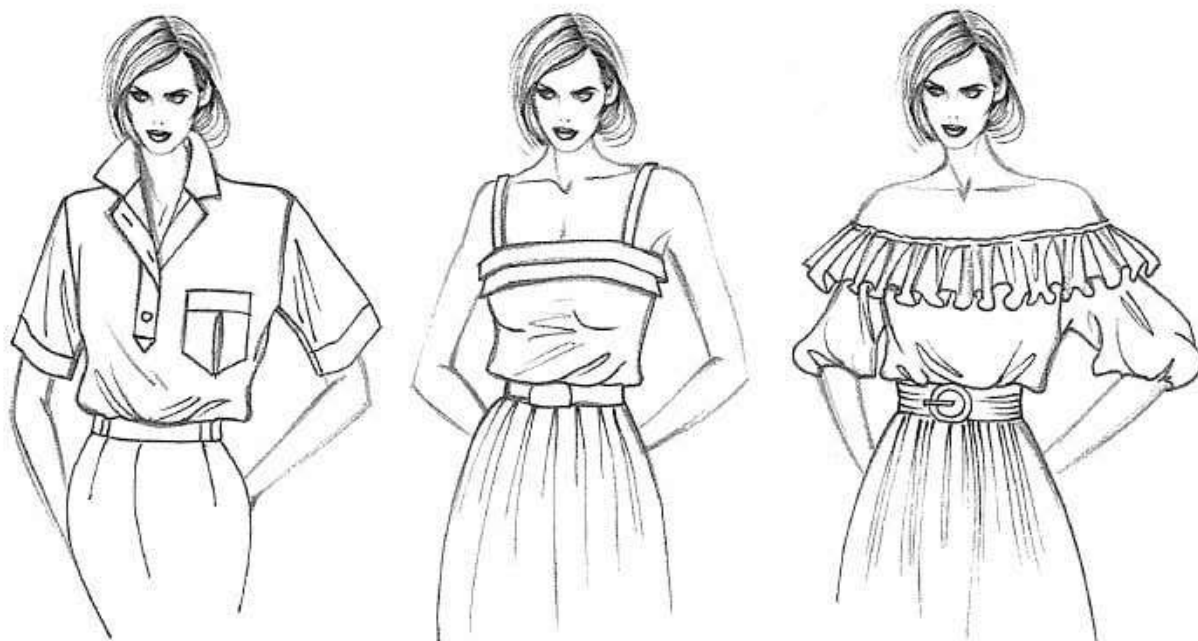
- FIG. 1 - Application of placket to the front side pocket lining.
FIG. 2 - Closure of pocket lining pouch.
FIG. 3 - Turning out pocket lining pouch.
FIG. 4 - Application of placket to the back pocket lining.
FIG. 5 - Closure of the back pocket lining.



BAND POCKET



BODICES AND BLOUSES



Bodices and blouses	140
Pattern terminology	141
Measurements for the bodice	142
Basic bodice measurements	144
Basic darted bodice block	145
The sleeves	148
Analysis of the arms	149
Pattern terminology	150
Fitted sleeve	151
Adaptation fitted sleeve	152
Armhole check and modification	153
Basic bodice block without darts	154
Basic fitted sleeve	155
Close-fitting blouse	156
Blouse sleeve with cuff	157
Shirt placket	158
Seam allowances	159
Basic dartless or loose-fitting shirt block	160
Loose-fitting shirt with yoke	161
Correction of bodice defects	162

BODICES AND BLOUSES

INTRODUCTION

The blouse or shirt is the upper part of attire, and it descends from the neck down to the waist, covering the bust and the hips. It can have long or short sleeves, and be with or without a collar.

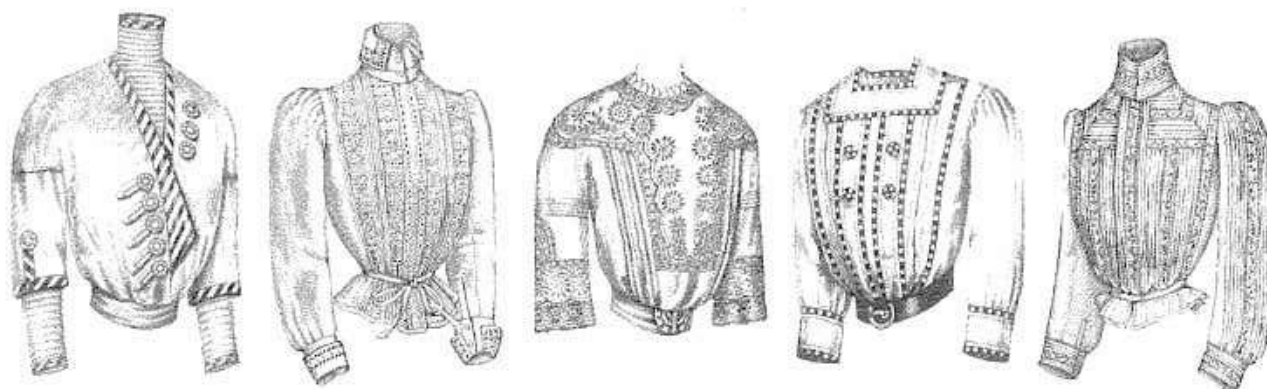
It made its first appearance in the 9th century, at first as an article of male attire in linen or silk, but it later became widely used among the court of Isabeau of Bavaria.

In the 16th century, woven cloth shirts were made that were

no longer hidden under the clothes, but they extended all the way down to the thighs; they were open at the bottom and had sleeves, but no collar.

Toward the 17th century, the shirt poked out from the doublet's waist, and it was richly decorated with lacework.

With the passing of the centuries, this garment, too, became simpler and more scaled down, so that in the present century a wide range of styles is proposed for men, women, and children, and they can be worn with trousers and skirts.



SHIRTS OF THE EARLY 19TH CENTURY

THE MAIN SHIRT STYLES AND FORMS

The particular style of every shirt pattern is determined by various distinguishing elements, such as, for example, the collar or the neckline, the sleeve style, the cut, trim, fabric, the length, and so on.

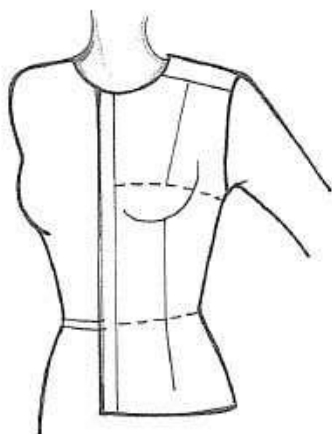
The most frequent shirt styles are:

- men's cut and collar, with or without yoke
- with casual collar and lapels - with stand-up or other collar - polo-style - fitted or loose style - blouse - tunic - asymmetrical - short or long - sleeved - with necklines of different shapes and styles.

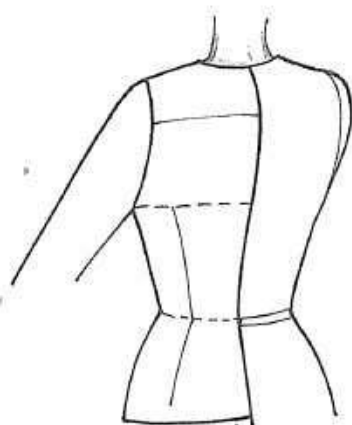


PATTERN TERMINOLOGY

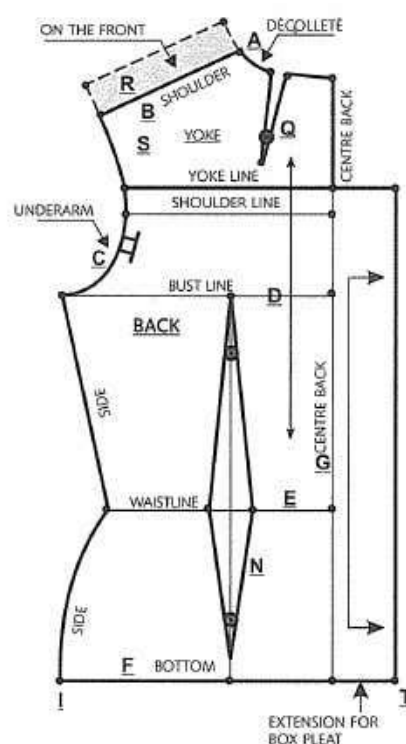
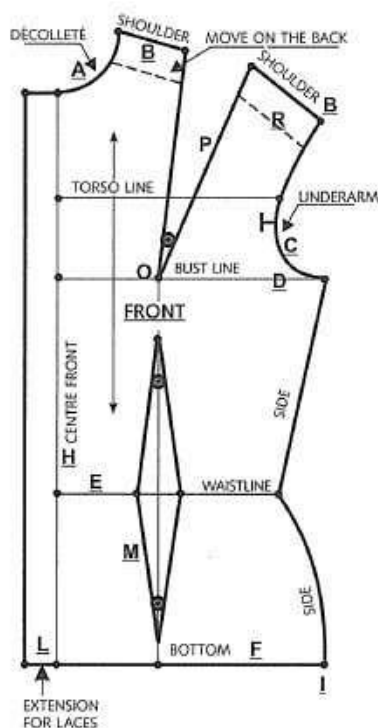
BODICE



FRONT



BACK



- A) - Décolleté - Round neckline - Collar stand.
- B) - Shoulder - Dropped shoulder - Shoulder slope.
- C) - Underarm - Sleeve head - Armscye.
- D) - Bust line
- E) - Waist - Waist circumference - Waistline.
- F) - Hips - Hip line - Seat - Hem
- G) - Centre back - Back half.
- H) - Centre front - Front half.
- I) - Side - Side part - Side seam.

- L) - Button plaque overlap.
- M) - Pleat - Tuck - Front dart
- N) - Pleat - Tuck - Rear dart.
- O) - Centre bust - Bust point.
- P) - Bust dart - Bust tuck
- Q) - Neck dart - Neck tuck.
- R) - Part transferred from front to back.
- S) - Yoke.
- T) - Box pleat.

MEASUREMENTS FOR THE BODICE

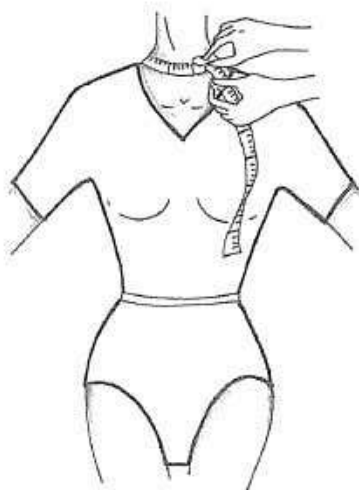
INTRODUCTION

For the construction of the bodice, the personal measurements required are:

- Neck circumference
- Torso girth
- Bust circumference
- Waist circumference
- Hip circumference
- Side length
- Abdomen circumference (just to double check)

Before taking the measurements, tie a ribbon or tape around the waist and one around the hips.

The measurements must be noted down immediately on the client's personal data sheet, along with the date and weight, in order to avoid mistakes and inaccuracy. Then the measurements have to be double checked against the pattern before laying it out and cutting the fabric.



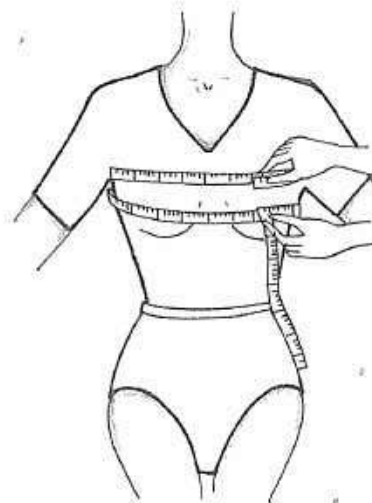
NECK CIRCUMFERENCE

NECK CIRCUMFERENCE

To measure it, rest the tape measure at the base of the neck.

TORSO GIRTH

This measurement is taken by looping the tape measure under the arms, around the highest point of the chest, along the fullest part of the back, but above the bust.



TORSO GIRTH
BUST CIRCUMFERENCE

BUST CIRCUMFERENCE

The circumference of the bust is a key measurement.

It is taken by looping the measuring tape around the fullest part of the bust, keeping the tape parallel to the floor, after making sure that the subject is wearing her usual bra and nothing else that is bulky.

WAIST CIRCUMFERENCE

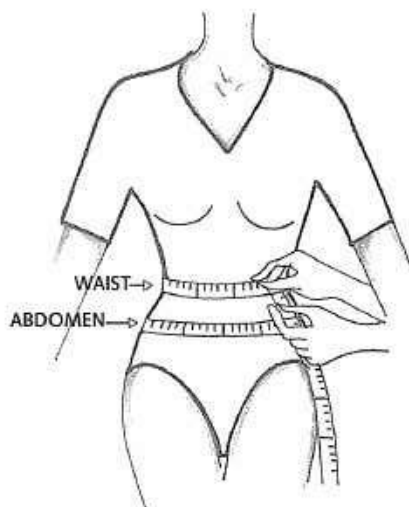
The circumference of the waist is taken by looping the measuring tape around the thinnest part of the waist, as shown in the figure.

ABDOMEN CIRCUMFERENCE

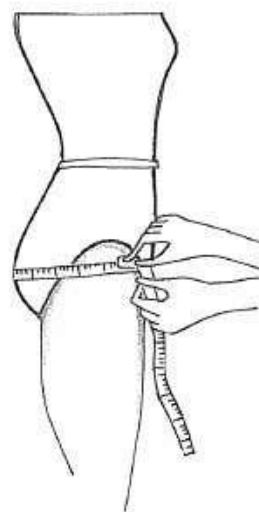
This measurement is only considered for the purposes of checking, and it is always better to take it just to make sure. To take it, loop the measuring tape around the widest part of the abdomen, about 8 cm from the waist.

HIPS CIRCUMFERENCE

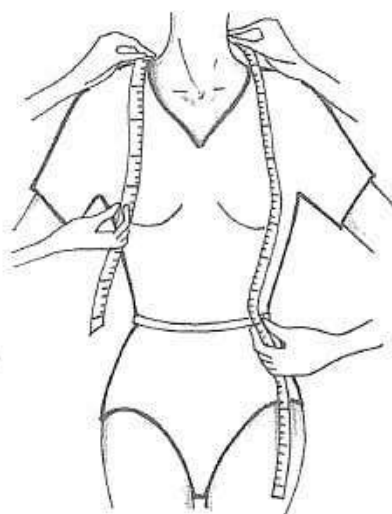
To take this measurement, loop the tape measure around the fullest part of the hips, keeping it parallel to the ground, and making sure to include the upper thighs and the derrière.



WAIST CIRCUMFERENCE
ABDOMEN CIRCUMFERENCE



HIPS CIRCUMFERENCE



**BUST HEIGHT
FRONT WAIST LENGTH**

CENTRE BUST HEIGHT

This is measured from the highest point of the shoulder, close to the neck, down to the centre of the bust.

This measurement must be taken with the client wearing her usual bra and nothing else that is bulky.

FRONT WAIST LENGTH

The front waist length is measured from the centre of the nape of the neck to the waist point, where the ribbon is tied, passing across the centre of the bust. Subtract from this measurement that of the neckline (from the centre of the nape to the highest point of the shoulder).

FRONT TORSO WIDTH

This measurement passes from one sleeve seam to the other, about halfway around the armhole.

BUST DIVERGENCE

Measure the distance between one bust point and the other, making sure that the subject is wearing her usual bra.

DIAGONAL SHOULDER WIDTH

Measure from the base of the neck to the outside of the shoulder joint.

REAR SHOULDER WIDTH

Measure from one sleeve seam to the other, about halfway around the armhole and 10–12 cm from the base of the back of the neck.

REAR WAIST LENGTH

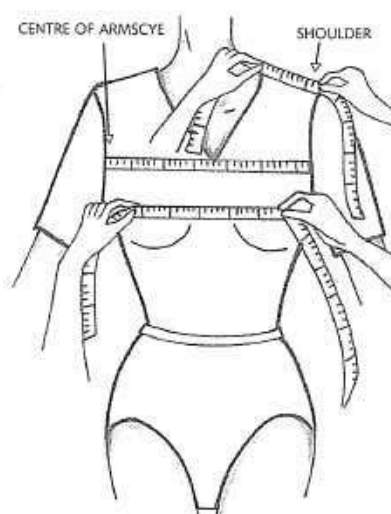
Measure from the base of the neck, where the bone protrudes, to the centre of the waist, where the ribbon is.

SIDE LENGTH

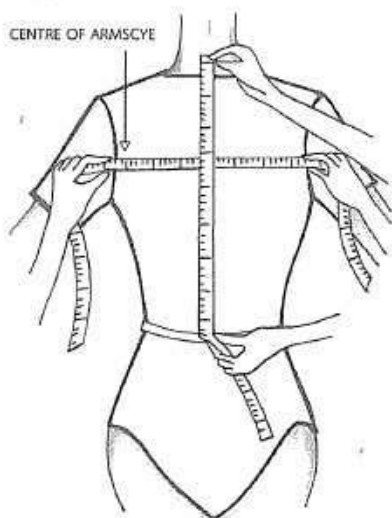
Measure from the centre of the waist, where the ribbon is, to the fullest part of the hips, where you should loop another ribbon or tape.

WAIST HEIGHT - UNDERARM CIRCUMFERENCE

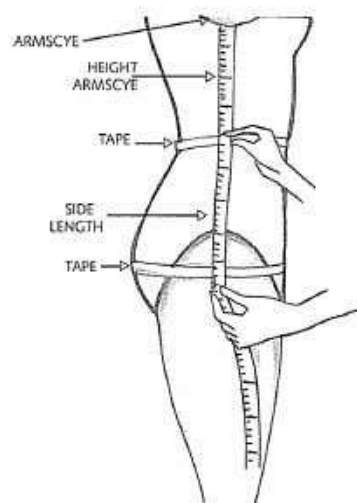
It is necessary to check this measurement in made-to-measure clothing, especially with close-fitting garment and for subjects whose shape is not regular.



**DIAGONAL SHOULDER WIDTH
FRONT TORSO WIDTH
BUST DIVERGENCE**



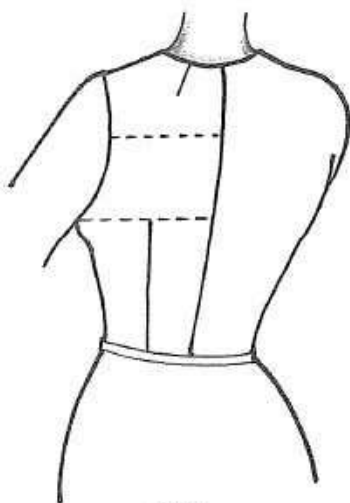
**REAR SHOULDER WIDTH
REAR WAIST LENGTH**



**WAIST HEIGHT - ARMSCYE
SIDE HEIGHT**

Note: The measurements have to be taken carefully, keeping the tape measure neither too tight nor too loose. Increase these measurements by the wearing ease, which varies depending on the type of garment, the kind of fabric, and the style, as shown in the table published in Chapter 1. The circumference and girth measurements plus the ease, are then divided by 2 because the pattern is to be made half.

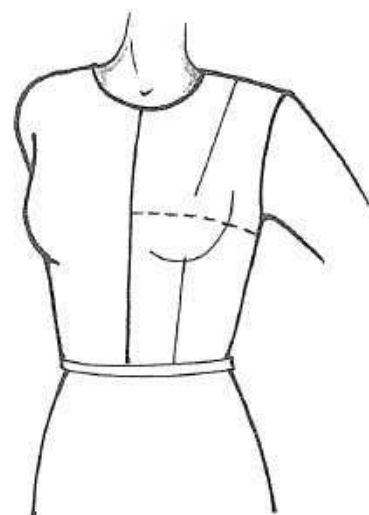
BASIC BODICE MEASUREMENTS



BACK

BACK

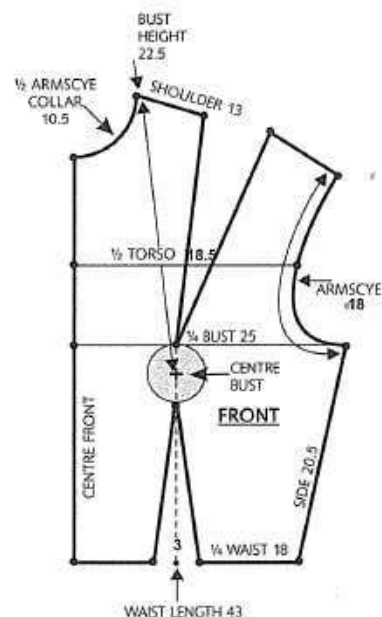
- $\frac{1}{2}$ back neckline = 6 + 1.5 cm of dart.
- $\frac{1}{4}$ circumf. bust + ease = 25 cm.
- $\frac{1}{2}$ width shoulders + ease = 19 cm.
- $\frac{1}{4}$ circumf. hips + ease (closed dart) = 18 cm.
- Length shoulders = 14 cm.
- Length back waist = 40 cm.
- $\frac{1}{4}$ circumf. hips + ease = 25 cm.
- Height shoulder line = 15.5 cm.
- Back armseye = 19.5 cm.
- Width neck dart = 1.5 cm.
- Length waist dart = 3 cm.
- Waistline tapering = 4 cm.



FRONT

FRONT

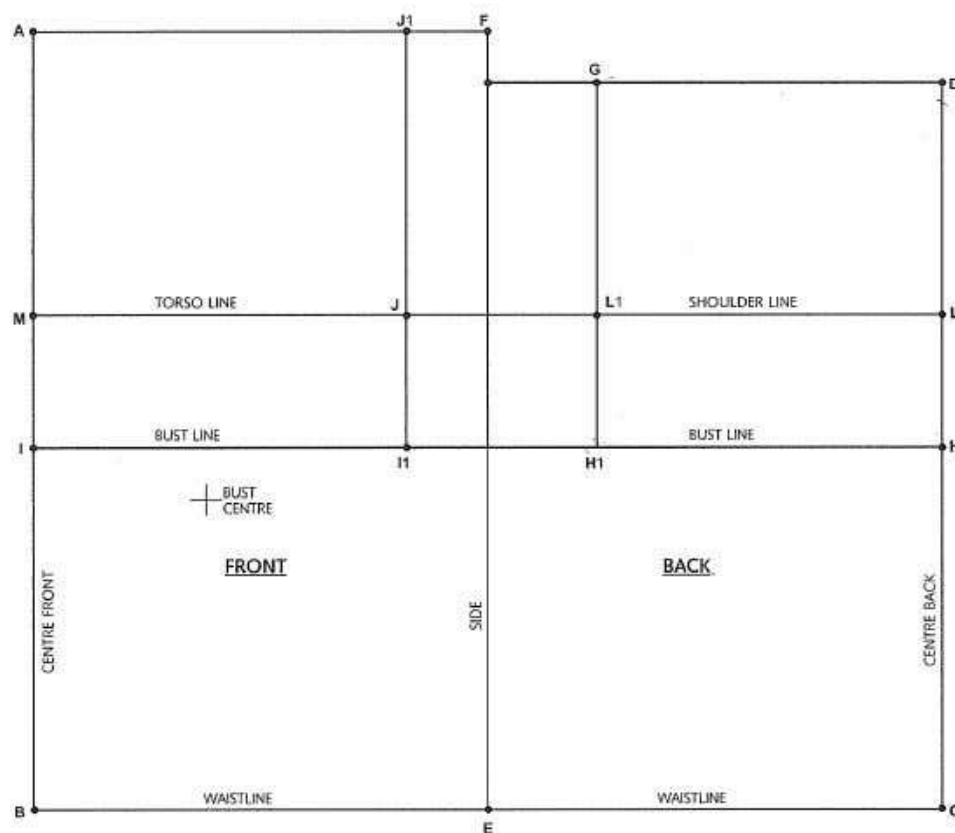
- $\frac{1}{2}$ front neckline = 9 cm.
- $\frac{1}{4}$ circumf. bust + ease = 25 cm.
- $\frac{1}{2}$ torso + ease (closed dart) = 18.5 cm.
- $\frac{1}{4}$ circumf. waist + ease (closed dart) = 18 cm.
- $\frac{1}{2}$ bust divergence = 9.5 cm.
- Shoulder (closed dart) = 14 cm.
- Hip + ease = 25 cm.
- Front waist length = 43 cm.
- Height bust line = 22.5 cm.
- Front armseye = 17.5 cm.
- Width bust dart = 6.5 cm.
- Length waist dart = 3 cm.
- Waistline tapering = 4 cm.



MEASUREMENTS BODICE - SIZE 42

NECK CIRCUMFERENCE			37	PERSONAL MEASURES	cm
TORSO CIRCUMFERENCE	86 + 8 Ease	= 94: 2	= 47		cm
BUST CIRCUMFERENCE	92 + 8 Ease	= 100: 2	= 50		cm
WAIST CIRCUMFERENCE	68 + 4 Ease	= 72: 2	= 36		cm
HIPS CIRCUMFERENCE	92 + 8 Ease	= 100: 2	= 50		cm
TORSO FRONT WIDTH	35 + 2 Ease	= 37: 2	= 18.5		cm
REAR SHOULDER WIDTH	36.5 + 2 Ease	= 38.5: 2	= 19.25		cm
WIDTH SECTOR	9.2 + 1.5 Ease	=	10.7		cm
NECK BACK			8		cm
BUST DIVERGENCE			18		cm
SHOULDER LENGTH			13.5		cm
BACK WAIST LENGTH			40		cm
FRONT LENGTH WAIST			43		cm
BUST HEIGHT			22.5		cm
SIDE HEIGHT			20		cm

BASIC DARTED BODICE BLOCK



Measurements:

- Semicircumference bust + ease 50 cm.
- Semicircumference torso + ease 47 cm.
- Semicircumference waist + ease 36 cm.
- Semicircumference neck 18.5 cm.
- Length front waist 43 cm.
- Length back waist 40 cm.
- $\frac{1}{2}$ width front torso + ease 20.5 cm. →
- $\frac{1}{2}$ width back shoulders + ease 19 cm. 
- $\frac{1}{2}$ the bust divergence 9.5 cm.
- Shoulder 13.5 cm.
- Circumference arm 29 cm.

- H-I parallel to B-C. Write BUST LINE (This line is 2-5 cm to the bust centre).
- D-G half shoulders width + ease $1.5 (\frac{2}{3} \text{ B-C} - 1 \text{ cm})$ (e.g.: $36.5 + 1.5 = 38: 2 = 19 \text{ cm}$).
- H-L $\frac{1}{3}$ D-H (e.g.: 6.7 cm).
- H-H1 like D-G (Half shoulders width 19 cm).
- H1-I1 width underarm section* (e.g.: 10.7 cm).
- Draw G-H1 parallel to D-H.
- Draw I1-J1 parallel to G-H1.
- I-M like H-L.
- Draw L-M parallel to H-I.
- Draw the Centre bust.

Base

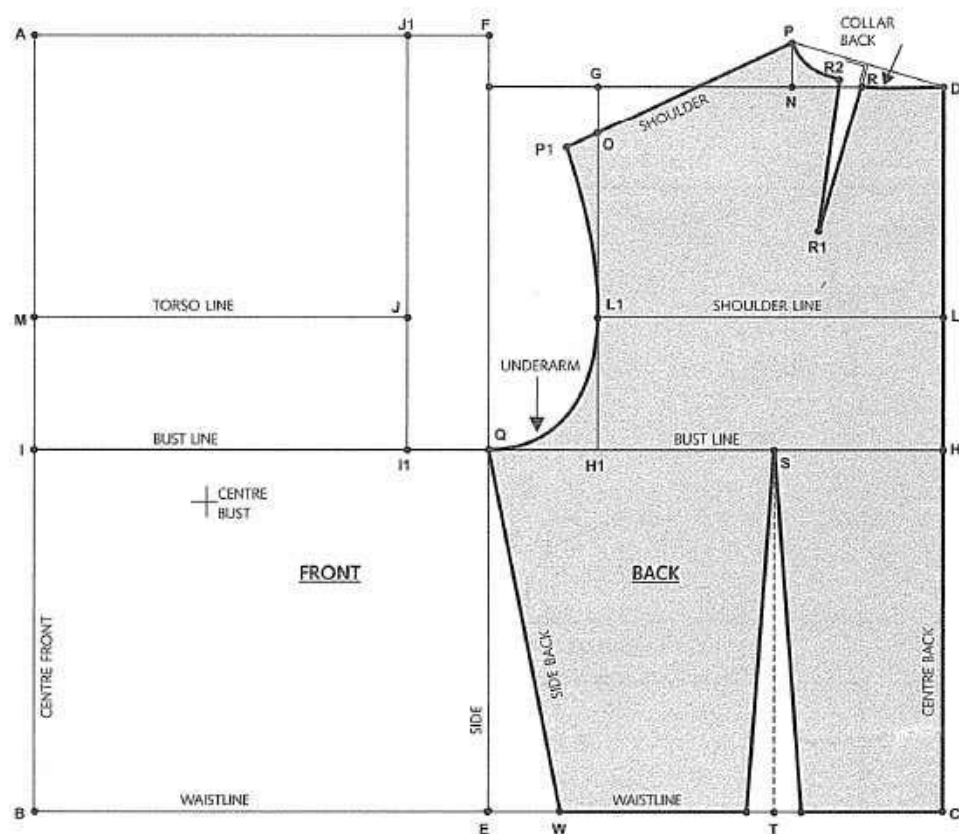
On the left side of a sheet of pattern paper, draw a right angle ABC, with:

- A-B Front waist length (e.g.: 43 cm). Write CENTRE FRONT.
- Semicircumference bust + $\frac{1}{2}$ ease.
(e.g.: $92 + 8 = 100$; $2 = 50$ cm)
- C-D Back waist length (e.g.: 40 cm). Write CENTRE BACK.
- B-E half B-C. Mark the point E.
- A-F like B-E. Mark the point F.
- Draw E-F. Write SIDE.
- D-H half C-D (e.g.: $40 : 2 = 20$ cm).

***Note 1:** The underarm section can be obtained using two methods:
 1) By personal measurement: Circumference upper arm plus ease divided by 3.14 + 1.5 (e.g.: 29: $3.14 = 9.2 + 1.5 = 10.7$).
 2) By size: 1/5 semi-circumference of the bust without ease + 1.5 cm (e.g.: 46: $5 = 9.2 + 1.5 = 10.7$).

Note 2: For blocks that do not call for ease (sleeveless garments or ones with low necklines, etc.), the underarm section H1-I1 is made 2 cm tighter, for a snugger fit.

BASIC DARTED BODICE BLOCK



Back

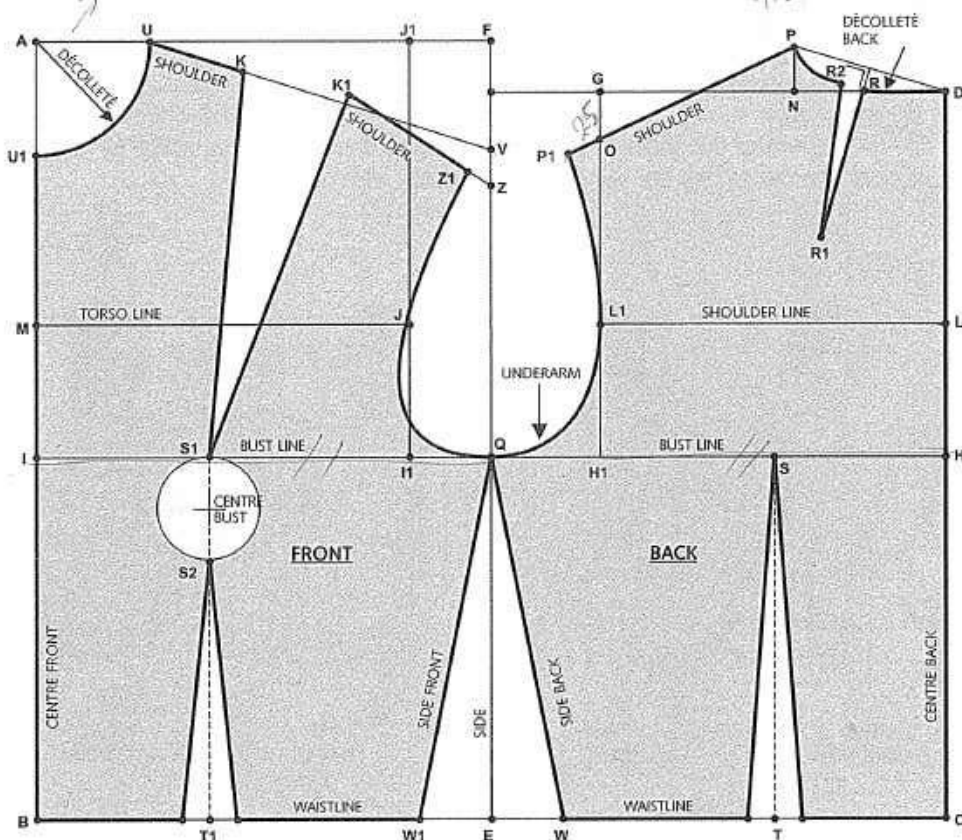
- G-O = 2.5 cm (this measure decreases if shoulder pads are called for).
- D-N = $\frac{1}{2}$ DG - 1 (e.g.: 19: 2 = 9.5 - 1 = 8.5 cm).
- N-P = 2.5 cm.
- Draw D-P.
- D-R = $\frac{1}{2}$ DP.
- R-R1 = 9.5 cm.
- Draw R-R1 perpendicular to D-P.
- R-R2 = 1.5 cm.
- Draw the neck dart R-R1-R2.
- Make a curved line that follows the shape of the neck and joins D-P.
- P-P1, passing through O, is the shoulder length measurement (e.g.: 13.5 cm)
- Mark the point Q midway along H-I.
- Draw the Armhole or Armscye P1-L1-Q, shaping it carefully.

Side tapering and back waist darts.

The reduction in the waist measurement in the back is made by tapering at the waist and inserting darts. The amount is obtained by subtracting half the waist circumference from half the bust circumference and dividing the result by 2 (e.g.: 50 - 36 = 14: 2 = 7 cm).

This amount is distributed between the side tapering and the waist darts, so we have:

- E-W = 4 cm (or another measurement based on the total waist tapering).
- Draw Q-W. **SIDE BACK**.
- H-S $\frac{1}{2}$ Bust Divergence (e.g.: 19: 2 = 9.5 cm).
- C-T like H-S.
- Draw S-T.
- Draw the waist dart with a width of 3 cm (or another measurement based on the total waist tapering) and the length T-S.



Front

- $A-U = \frac{1}{3}$ of DG on back (e.g.: $19: 3 = 6.3$ cm).
- Draw an arc U-U1 with the centre at A and the measurement A-U.
- $I-I1$ is like $H-H1 + 1$ on back (e.g.: $19 + 1 = 20$ cm).
- $I-S1 = \frac{1}{2}$ bust divergence (e.g.: $19: 2 = 9.5$ cm).
- $F-V = 6$ cm (less any shoulder pad thickness).
- Join U-V
- $U-K = \frac{1}{3}$ of P-P1 on back + 1 cm (e.g.: $13.5: 3 = 4.5 + 1 = 5.5$ cm).
- $K-K1$ = the difference between the Bust Circumference and the Torso girth + 0.5 cm (e.g.: $92 - 86 = 6 + 0.5 = 6.5$ cm).
- $K1-S1 = K-S1$. Join.
- $V-Z = \frac{1}{3} F-V$ (e.g.: $6: 3 = 2$ cm).
- $K1-Z1 = P-P1$ on back minus $U-K$ (e.g.: $13.5 - 5.5 = 8$ cm).
- Draw the Armhole or Armscye $Z1-J-Q$, shaping it carefully.

Side tapering and the front waist dart.

- The reduction in the waist measurement is calculated as on the back, subtracting half the waist circumference from half the bust circumference and dividing the result by 2 (e.g.: $50 - 36 = 14: 2 = 7$ cm).
- This amount is distributed between the side tapering and the waist darts, so we have:
- $E-W1$, like $E-W$ on the back = 4 cm.
 - Draw $Q-W1$. SIDE FRONT.
 - $I-S1 = \frac{1}{2}$ Bust divergence (e.g.: $19: 2 = 9.5$ cm).
 - $B-T1 = I-S1$.
 - $S1-S2 = 5.8$ cm. DART TIP POSITION.
 - Draw $S2-T1$ using a broken line.
 - Draw the waist dart with a width of 3 cm (or another measurement based on the total waist tapering) and the length $T1-S2$, at the edge of the circle.

THE SLEEVES

INTRODUCTION

The sleeve is the upper part of a male or female garment (shirt, suit, jacket, overcoat, etc.) that covers the arms from the shoulders to the wrist.

Sleeves can have various styles and shapes, different lengths, and different volumes.

There are essentially three main sleeve styles:

Fitted sleeves — Kimono sleeves — Raglan sleeves.

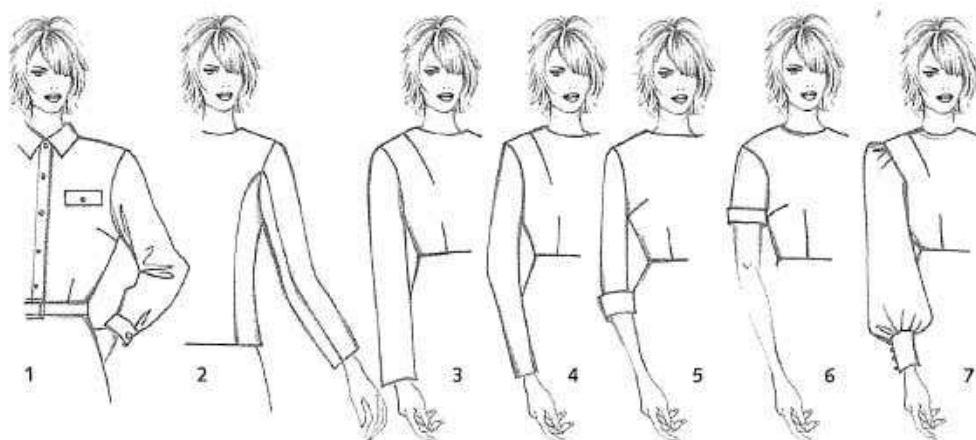
Fitted sleeves are sewn into the armhole of the bodice, and they may consist of a single piece or two pieces, and the sleeve itself

can be close-fitting or puffed, long or short and with the end tight or loose, but all of them have the head part sewn into the armhole of the bodice.

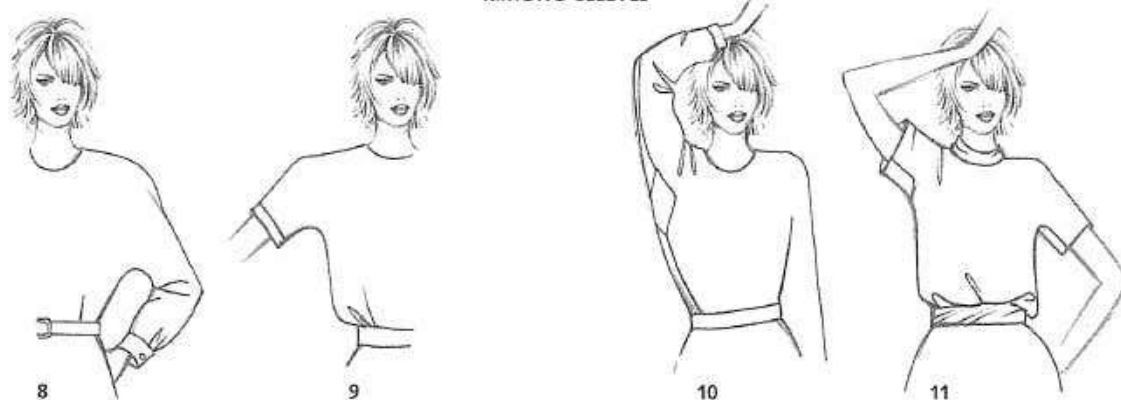
Kimono sleeves are made in a single piece with the bodice, and without stitching at the sleeve head. They can be close-fitting or very roomy, long or short, with the bottom wide or narrow.

Raglan sleeves are sewn onto the bodice with diagonal shapes that from the underarm extend to the collar. Raglan sleeves may take different shapes: hammer, yoked of varying wideness, with the bottom wide or narrow.

FITTED SLEEVES



KIMONO SLEEVES



RAGLAN SLEEVES



Sleeve types: 1) Fitted sleeve for shirt with cuff; 2) Fitted sleeve with two seams; 3) Cylindrical or straight fitted sleeve; 4) Skinny fitted sleeve; 5) Three-quarters fitted sleeve; 6) Short fitted sleeve; 7) Wide fitted sleeve; 8) Long kimono sleeve with cuff; 9) Short kimono sleeve; 10) Long kimono sleeve with gusset; 11) Short kimono sleeve with gusset; 12) Long Raglan sleeve with cuff; 13) Short Raglan sleeve; 14) Hammer raglan sleeve.

ANALYSIS OF THE ARMS

ANALYSIS OF THE ARM TYPES

Knowledge of the anatomical conformation of the arms is indispensable for a correct realization of the sleeves, especially if they are close-fitting or sewn-in.

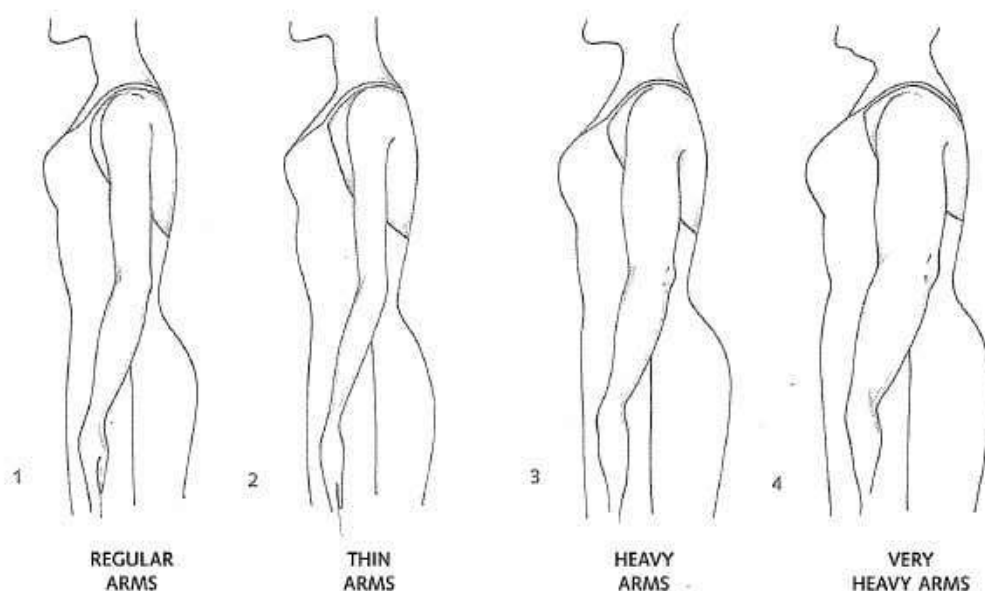
The most common arm types are:

1) *Regular arms*: Nearly straight shape from the shoulder to the elbow, with a tapered wrist.

2) *Thin arms*: Conformation with fine bone structure and anatomy, in both the upper and the lower arms.

3) *Heavy arms*: Conformation enlarged from the shoulder to the elbow.

4) *Very heavy arms*: Conformation very much enlarged from the top of the shoulder to the elbow, and even the forearm is substantial.



ANALYSIS OF THE POSITION OF THE ARMS

An analysis of the position of the arms with respect to the rest of the figure is very important for the perfect fall of the sleeve. In fact, the position of the sleeve's centre shoulder must be adapted to the shape and position of the subject's arm.

There are two main position defects: forward sleeve and backward sleeve.

1) *Regular arms*: The centre of the arm is precisely aligned with the centre of the body, so that the centre of the sleeve, positioned with the centre of the shoulder, allows it to fall perfectly.

2) *Forward arms*: The forward arm carries along with it the shoulder blade and the spine, increasing the fullness and convexity of the back area, and contracting and flattening the front.

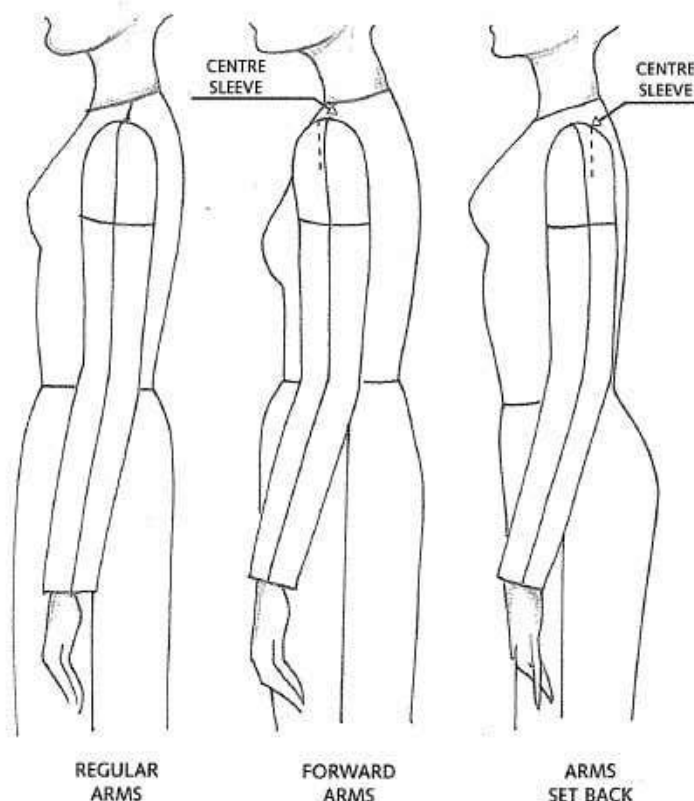
When the arms are set forward, the centre of the sleeve should be shifted back with respect to the centre of the bodice shoulder.

Moreover, this conformation increases the girth of the back and reduces the front, so the basic block has to be modified accordingly.

3) *Arms set back*: With arms thrust backwards, the hollow in the centre of the back increases, while the effect of the jutting shoulder blade and the slope of the shoulder are diminished. The back of the chest and the spinal curve are reduced and the bust point instead increases.

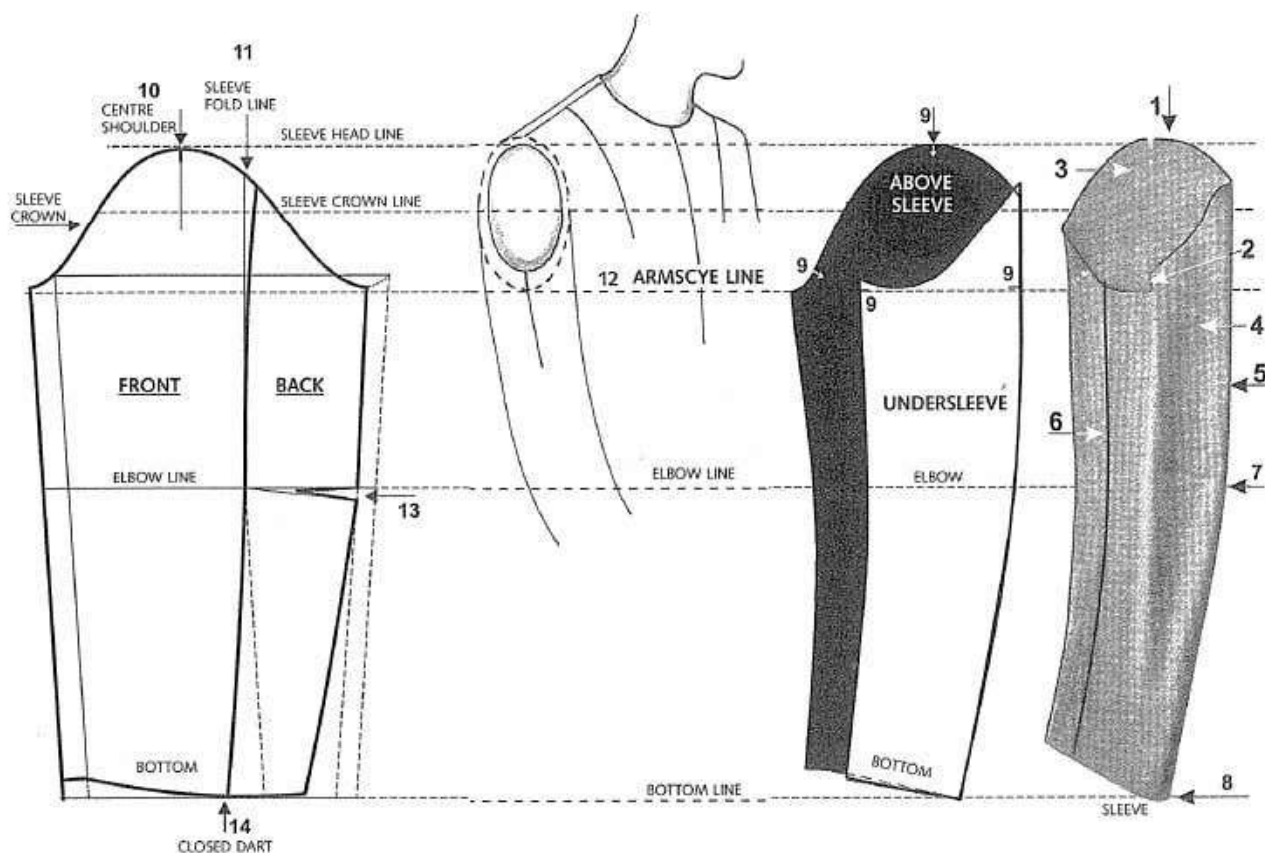
Therefore, the basic pattern will have to be adapted to the shape, by carefully measuring the parts.

When the arms are set back, the centre of the sleeve must be shifted forward with respect to the bodice's centre shoulder.

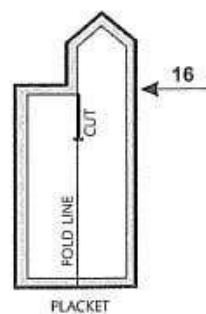
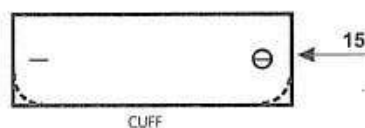
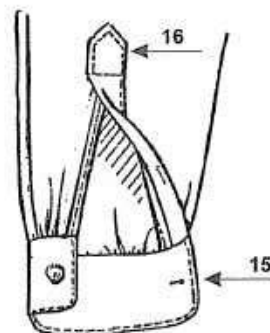


PATTERN TERMINOLOGY

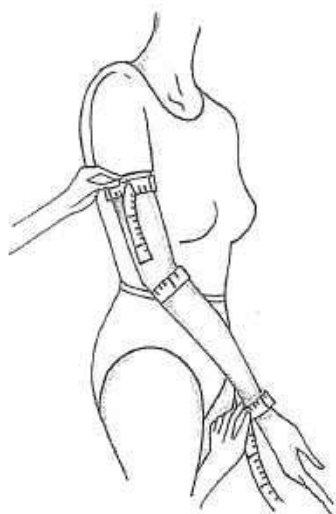
SLEEVES



- 1) - Sleeve head - Sleeve crown.
- 2) - Armscye - Armhole.
- 3) - Oversleeve.
- 4) - Undersleeve.
- 5) - Undersleeve side seam line.
- 6) - Undersleeve centre armscye seam line.
- 7) - Elbow line.
- 8) - Sleeve hem.
- 9) - Notches.
- 10) - Centre shoulder.
- 11) - Fold line.
- 12) - Armscye line.
- 13) - Elbow dart.
- 14) - Undersleeve dart.
- 15) - Cuffs.
- 16) - Placket for sleeve vent.



FITTED SLEEVE



- UPPER ARM CIRCUMFERENCE
- ELBOW CIRCUMFERENCE
- WRIST CIRCUMFERENCE

UPPER ARM CIRCUMFERENCE

Measure by looping the tape measure around the fullest part of the upper arm, close to the underarm.

ELBOW CIRCUMFERENCE

Measure the circumference at the centre of the elbow.

WRIST CIRCUMFERENCE

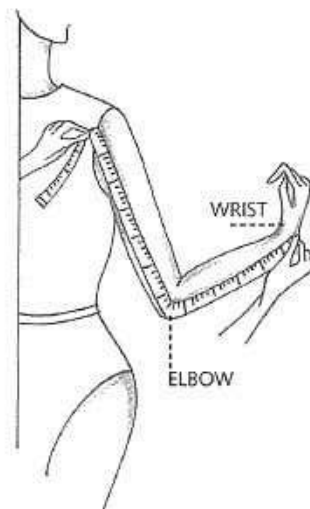
Measure the circumference just above the hand.

TOTAL ARM LENGTH

Measure from the shoulder seam, at the same point where the shoulder width is measured, passing by the elbow, with the arm slightly bent, and on to where the hand meets the wrist.

ELBOW HEIGHT

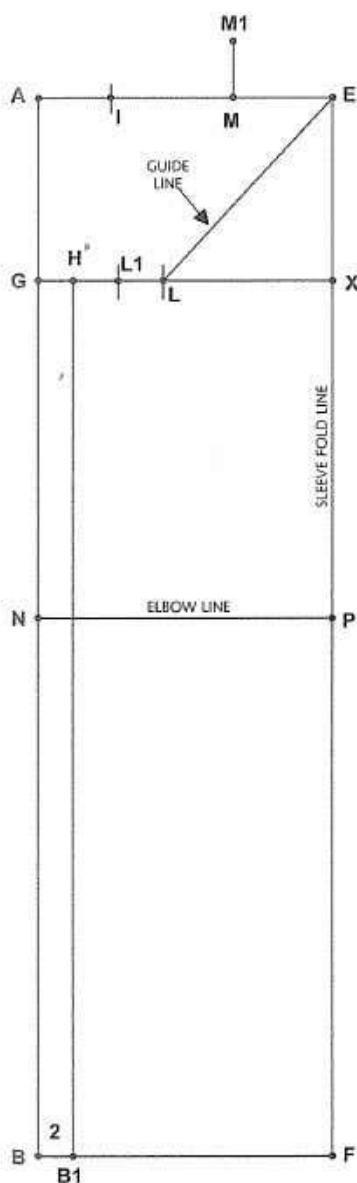
Measure from the shoulder seam to the elbow bone.



- TOTAL ARM LENGTH
- ELBOW HEIGHT

BASIC FITTED SLEEVE BLOCK

FOR FORM-FITTING BODICE

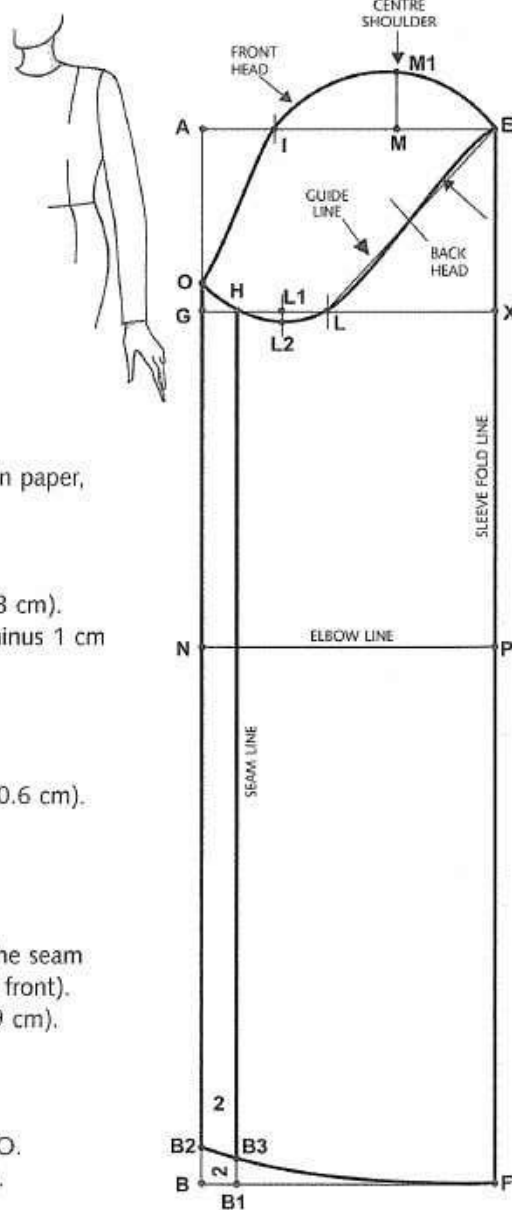


Measurements

- Arm circumference 29 cm + ease.
- Arm length 58 cm.

On the left hand side of a sheet of pattern paper, draw a rectangle A-B-E-F, with:

- A-E like sector bodice + 1/2 sector.
(e.g.: 10.7 + 5.35 = 16 cm).
- A-B measurement length sleeve (e.g.: 58 cm).
- A-G = L1-P1 of the basic bodice back minus 1 cm
(e.g.: 10 - 1 = 9 cm).
- Draw G-X parallel to A-E.
- A-N = half A-B (e.g.: 58: 2 = 29 cm).
- Write ELBOW LINE.
- A-M = 2/3 A-E (e.g.: 16 x 2 = 32: 3 = 10.6 cm).
- Write CENTRE SHOULDER.
- M-M1 1/3 A-G (e.g.: 9: 3 = 3 cm).
- A-I 1/4 A-E (e.g.: 16: 4 = 4 cm).
- G-H 2 cm.
- Draw H-B1 parallel to A-B (This line is the seam line and often it must be moved to the front).
- X-L half G-X + 1 (e.g.: 16: 2 = 8 + 1 = 9 cm).
- L-L1 half H-L.
- L1-L2 1 cm.
- G-O 1.5 cm.
- Draw accordingly the front head E-M1-I-O.
- Draw accordingly the back head E-L-H-O.
- Draw with curve the bottom F-B2.



ADAPTATION FITTED SLEEVE

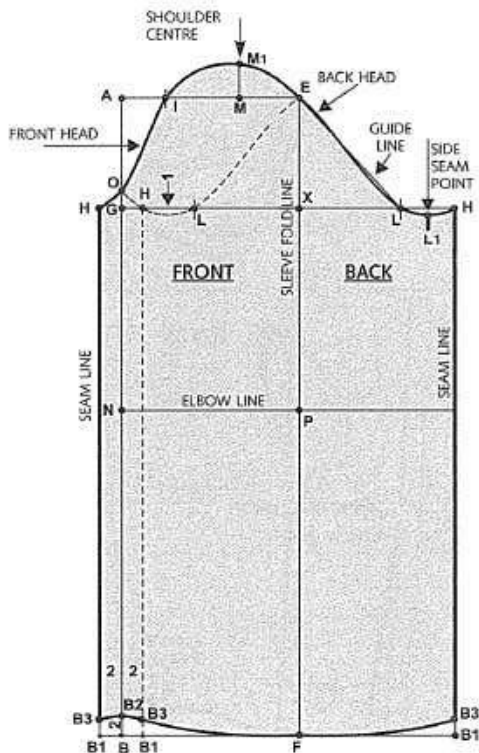


Fig. 1
SLEEVE SEAM MOVED TO THE FRONT

OPEN SLEEVE

- Copy the back part of the sleeve E-F-B3-H-L2-L-E, and position it on the fold line E-F.
- Copy the part H-B3-B2-O and position it on the line B2-O. Or, if the pattern calls for it, on the back line H-B3.

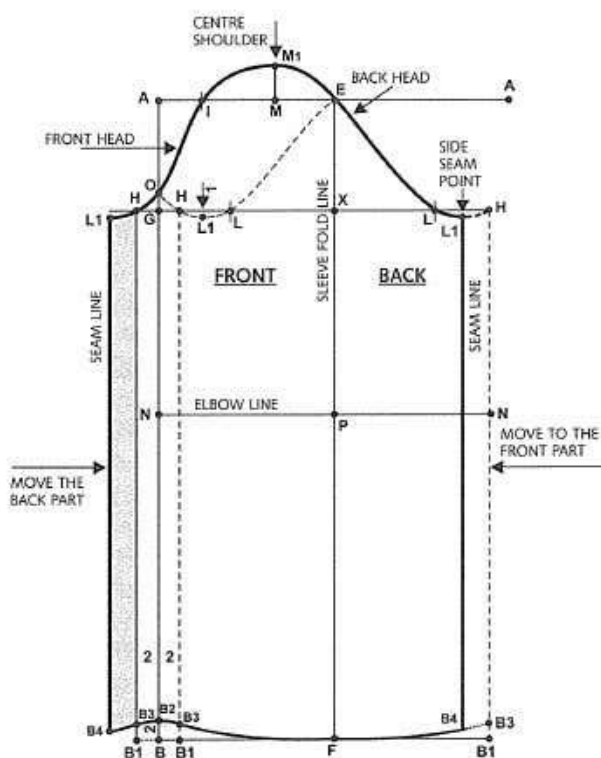
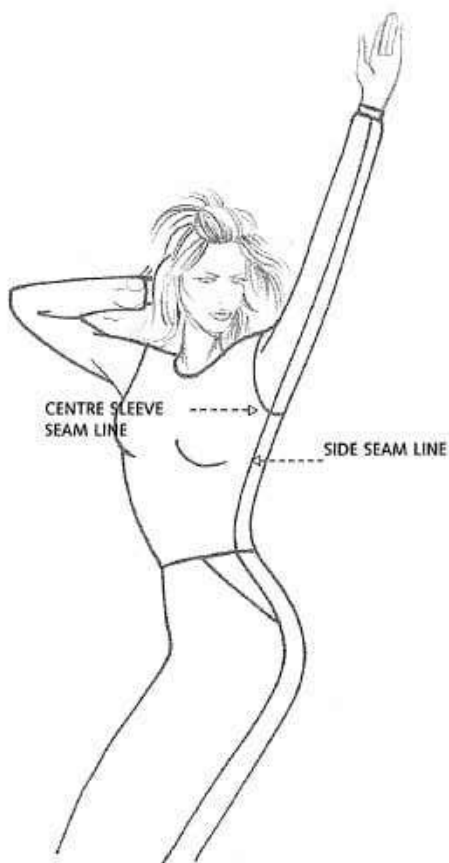
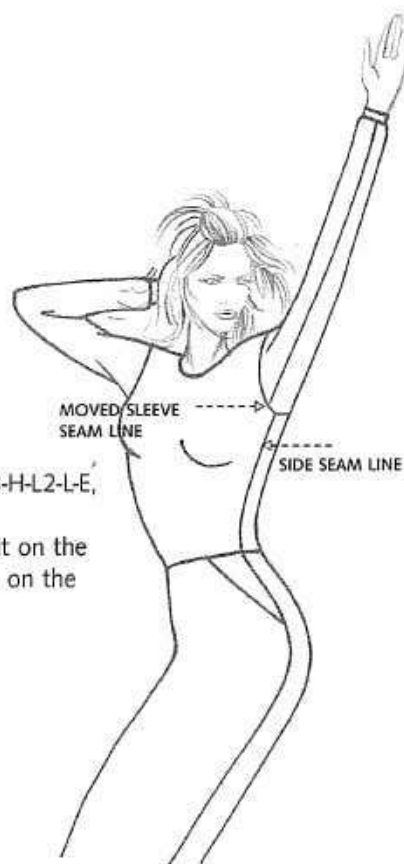
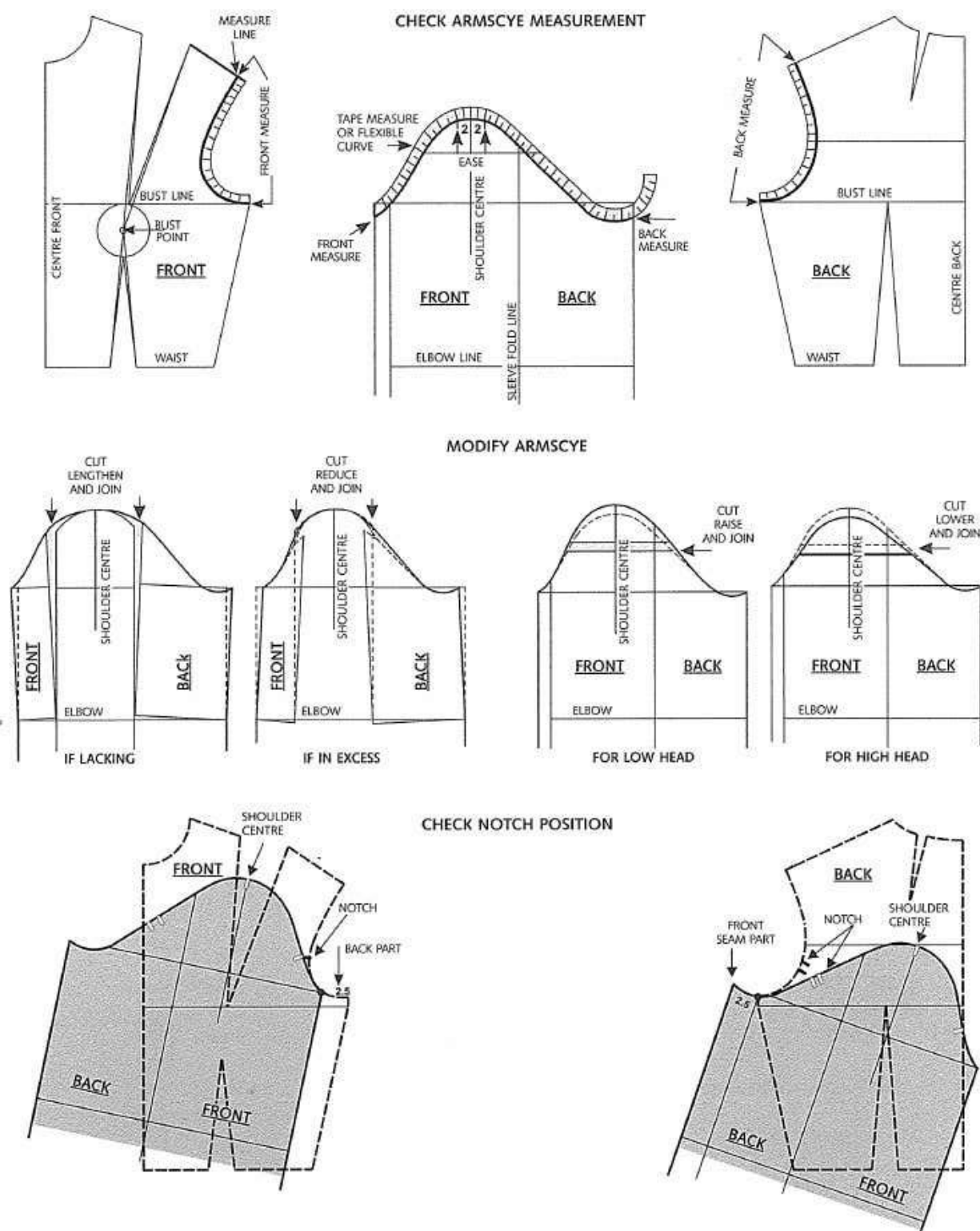


Fig. 2
SLEEVE ALIGNED WITH THE SIDE SEAM

Note: The sleeve seam must be kept forward 2-3.5 cm from the side seam (Fig. 1). To get a sleeve with its seam aligned with the side seam, you have to move the back part H-B3-L3-H, to the front seam line, as shown in Figure 2.

ARMSCYE CHECK AND MODIFICATION



The basic bodice block and the corresponding armseye, before passing on to the successive production phases (industrialization, layout, cutting, etc.), must first be checked and marked:

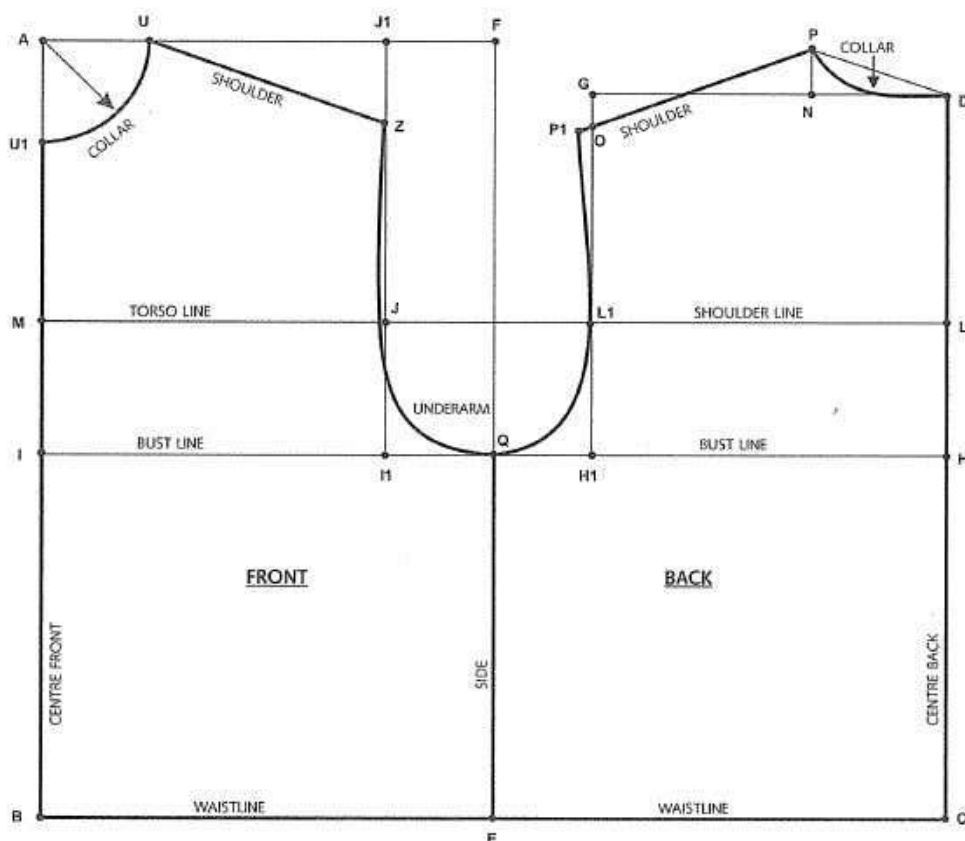
- Check that the measurement of the sleeve head or crown is the same as the bodice armseye plus the 2-4 cm of tolerance needed for assembly and the ease (the amount of ease depends on the weight and type of fabric).
- Check that the notches on the sleeve correspond to those of the

bodice, based on the position of the sleeve seam in relation to the side seam, which must be moved 2.5-3 cm toward the front.

If you want to have the seam even with that of the side, it is necessary to change the basic sleeve block as shown in the figure.

- If the armseye measurement is much too big or much too small compared to that of the bodice, it has to be modified as shown above.

BASIC BODICE BLOCK WITHOUT DARTS



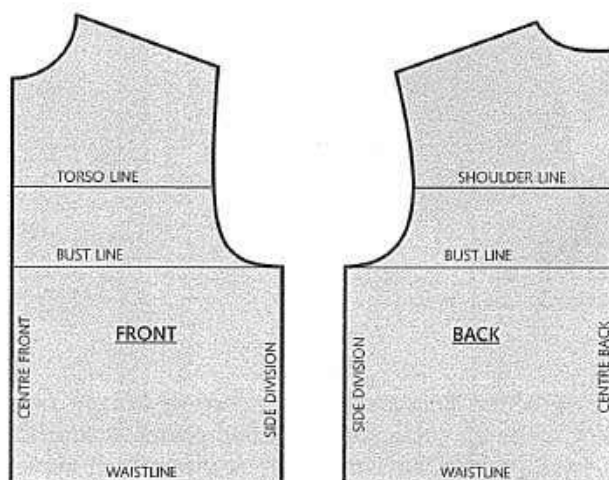
- Draw a right angle A-B-C, with:
- A-B equal to front Waist length (e.g.: 43 cm).
- B-C equal to half the bust circumference plus ease.
(e.g.: $92 + 8 = 100$; $100 : 2 = 50$ cm).
- C-D Back waist length (e.g.: 40 cm).
- B-E Half B-C.
- A-F like B-E. Draw E-F (SIDE LINE).
- D-H half C-D (e.g.: $40 : 2 = 20$ cm).
- Draw H-I. BUST LINE.
- D-G measures $\frac{1}{2}$ Shoulder width + 1 cm ($\frac{2}{5}$ of B-C; e.g. shoulder width 19 + 1 = 20 cm).
- H-H1 = D-G. Draw H1-G.
- $H1-I1 = \frac{1}{5}$ H-I plus 1.5 cm (e.g.: $50 : 5 = 10 + 1.5 = 11.5$ cm).
- Draw I1-J1 parallel to H1-L1-G.
- H-L = $\frac{1}{3}$ D-H (e.g. 20: 3 = 6.7 cm). Draw L-M.

Back

- G-O = 1.5 cm (This measure decreases if shoulder pads are called for).
- D-N = $\frac{1}{2}$ shoulder width - 2 cm (e.g.: 7.5 cm).
- N-P = 2.5 cm. Draw D-P.
- Draw P-O-P1 Shoulder length measure (e.g.: $13.5 + 0.5 = 14$ cm).
- Mark the point Q midway along H-I.
- Draw the Armhole or Armscye P1-L1-Q, as shown in the figure.

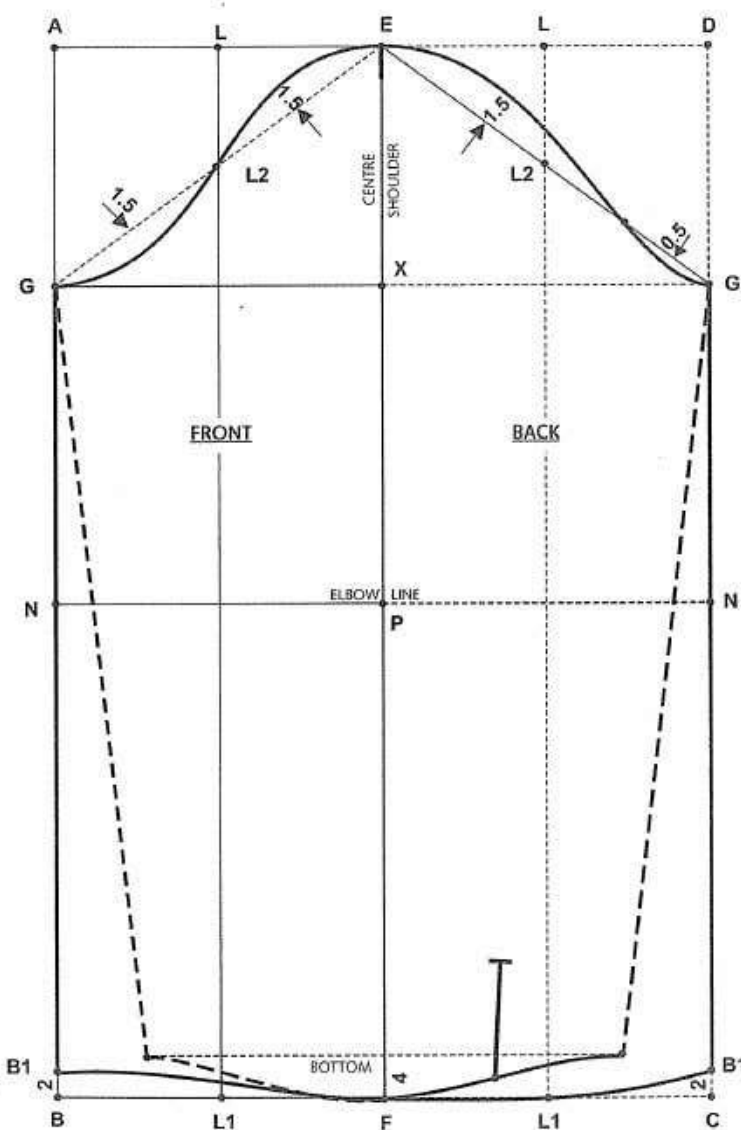
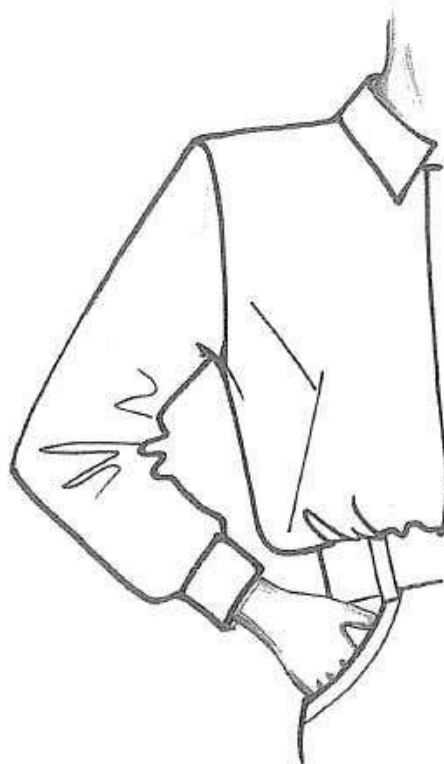
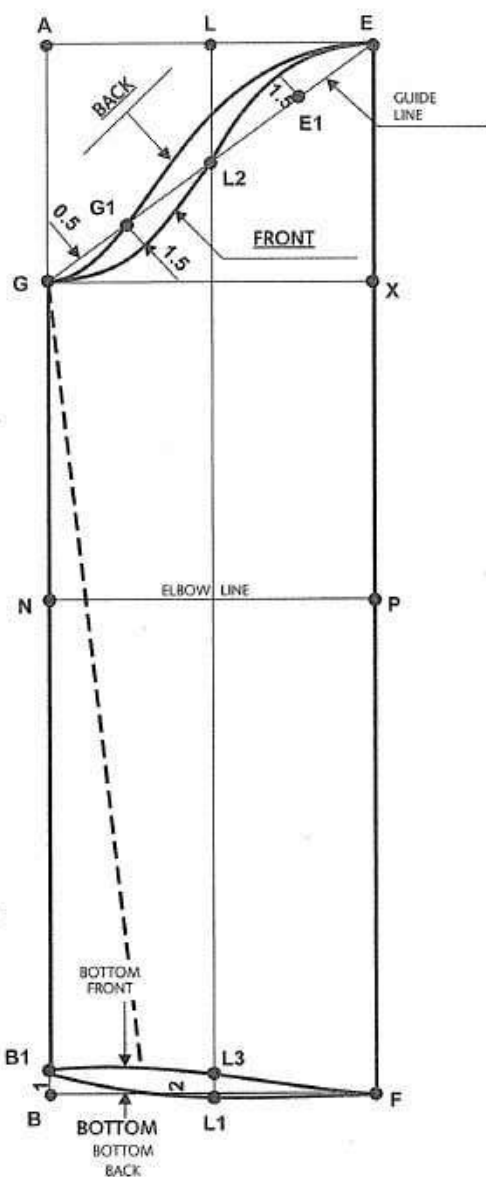
Front

- A-U = $\frac{1}{6}$ Shoulder width (e.g.: $38 : 6 = 6.3$ cm).
- Draw the arc U-U1.
- J1-Z = 5 cm (This measure decreases if there are shoulder pads.)
- Draw U-Z equal in measure to P-P1 on the back.
- Draw Z-J-Q as shown in the figure.



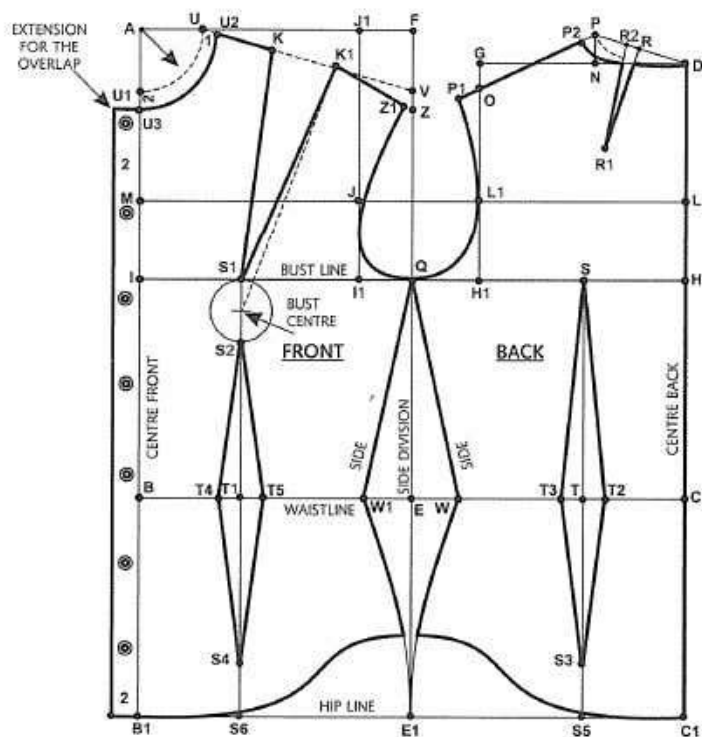
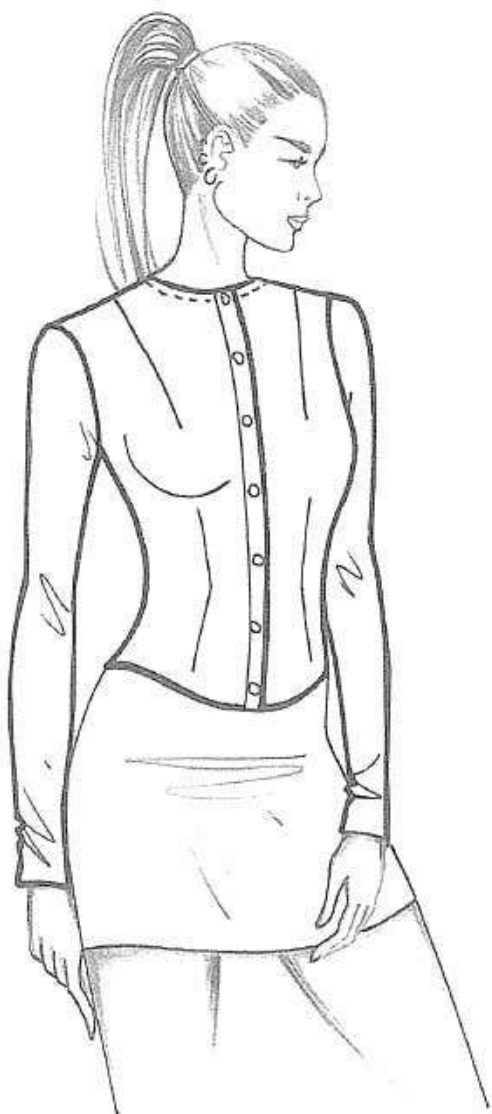
BASIC FITTED SLEEVE

FOR BODICE WITHOUT DART

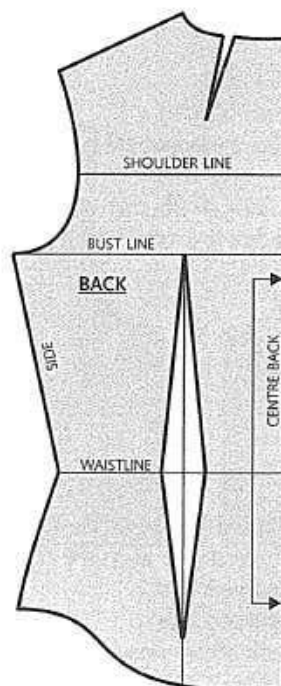
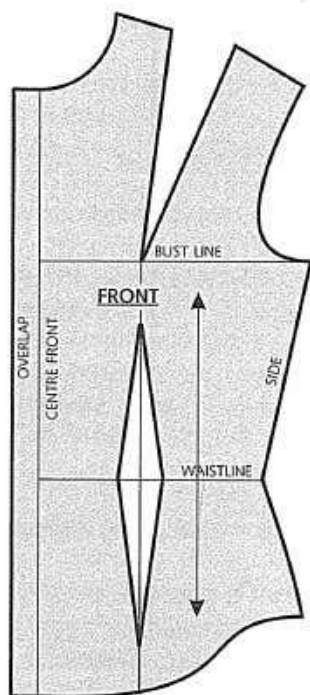


- Draw a rectangle A-B-E-F with:
- A-B = Sleeve length (e.g.: 58 cm).
- A-E = the Bodice section measurement + $\frac{1}{2}$ the same section measurement (e.g.: Section 11.5 + 5.75 = 17.25 cm).
- A-G = L1-P1 on the bodice + 1 cm (13 cm).
- Draw G-X.
- Join G-E with diagonal.
- A-N = half A-B + 2 cm. Join N-P.
- A-L = half A-E. Draw L-L1.
- L2 = half G-E.
- Move L3 2 cm from L1.
- E1 = half E-L2.
- G1 = half G-L2.
- Draw E-L2-G with a curved line as in the figure.
- Draw E-G1-G with a curved line as in the figure.
- Draw B1-L3-F with a curved line.
- Draw B1-L1-F with a curved line.
- Copy the front and back of the sleeve and draw the full sleeve as in the figure.

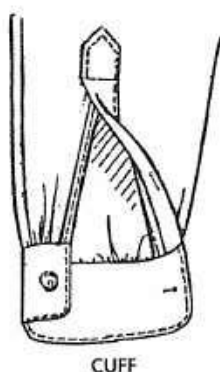
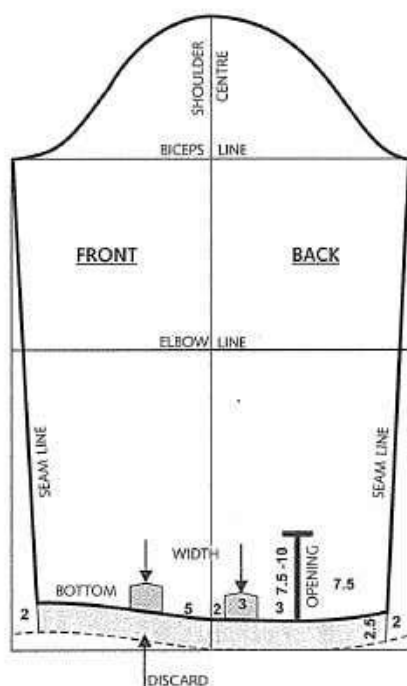
CLOSE-FITTING BLOUSE



- Draw the basic block with darts and 6-8 cm ease.
- Extend the centre back, centre front and side division lines, as desired (15-20 cm).
- Draw the extension for the overlap of the button placket.
- Lower the neckline as desired (2 cm).
- Move U-U2 and P-P2 1 cm.
- Finish the bottom with desired shape.



BLOUSE SLEEVE WITH CUFF



CUFF



BAND

- Draw the basic sleeve block with seam aligned with the bodice side (or the sleeve for bodice without darts).
- Shorten the bottom of the sleeve by 2.5–5 cm (or the length desired), depending on the height of the cuff (cuff height less 2.5 cm for a bit of richness) and taper the end as desired (2 + 2 cm).
- Draw the line for the opening, at 7.5 cm from the back seam, for a length of around 7.5–10 cm.
- Draw the markers for the pleats at the sleeve bottom, about 3 cm each.

SIMPLE CUFF

- Draw a rectangle A-B-C-D, with:
- A-B equal to the desired cuff height.
- A-D equal to the measurement of the wrist + 2 cm or 3 cm ease.

SINGLE CUFF

- Draw a rectangle A-B-C-D, with:
- A-B equal to the double of the cuff height.
- A-D equal to the measurement of the wrist + 2 cm or 3 cm ease.
- A-E half A-B. Draw E-F.
- C-C1 and B-B1 0.6 cm. Trim the inner pieces.

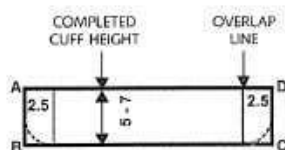
DOUBLE CUFF

- Draw a rectangle A-B-C-D, with:
- A-B equal to the double cuff height deduct 1 cm.
- A-D equal to the measurement of the wrist + 2 cm or 3 cm ease.
- A-E = half A-B-1 cm. Draw E-F.

EDGE AND PLACKET

The opening with edging is the most common system used in shirts. The edge is made with a strip of fabric on the straight grain, double the length of the opening and at least 3.5 cm wide.

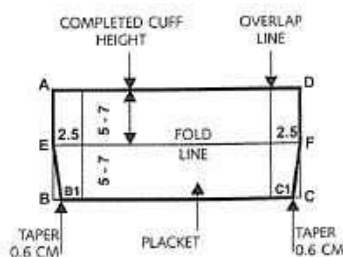
For the placket, it is necessary to make the pattern, as clearly shown in the illustration.



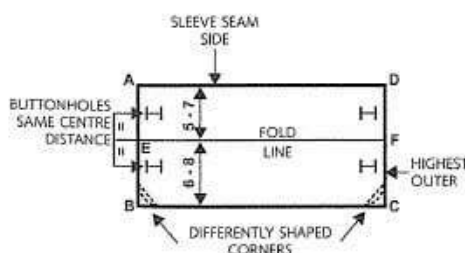
SINGLE-PIECE CUFF 4 PIECES



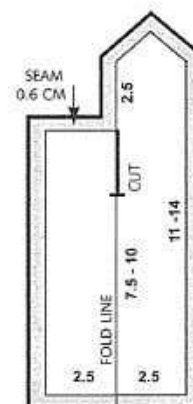
BAND 2 PIECES



SINGLE CUFF 2 PIECES

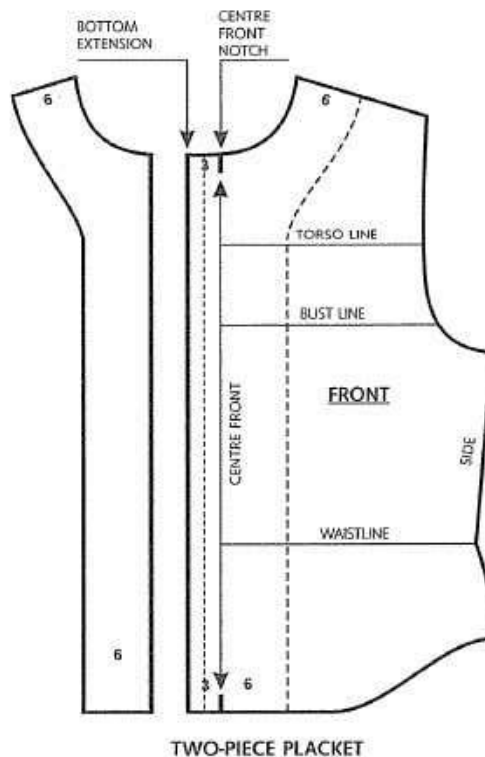
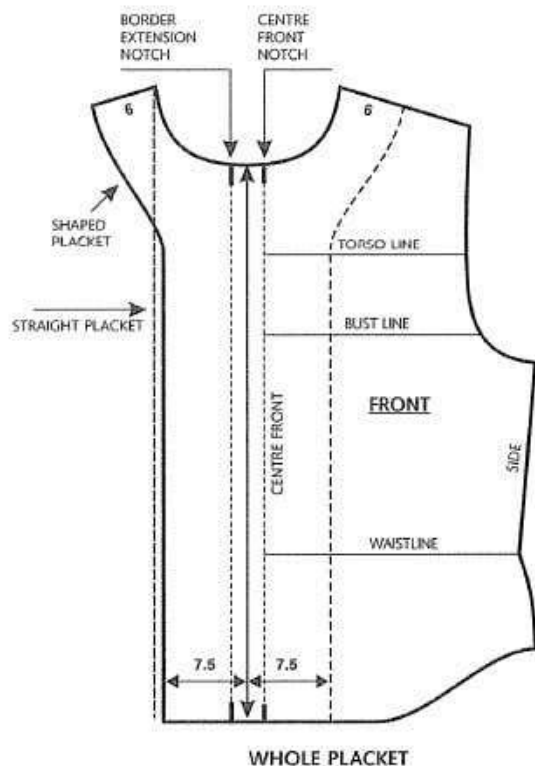


DOUBLE CUFF 4 PIECES



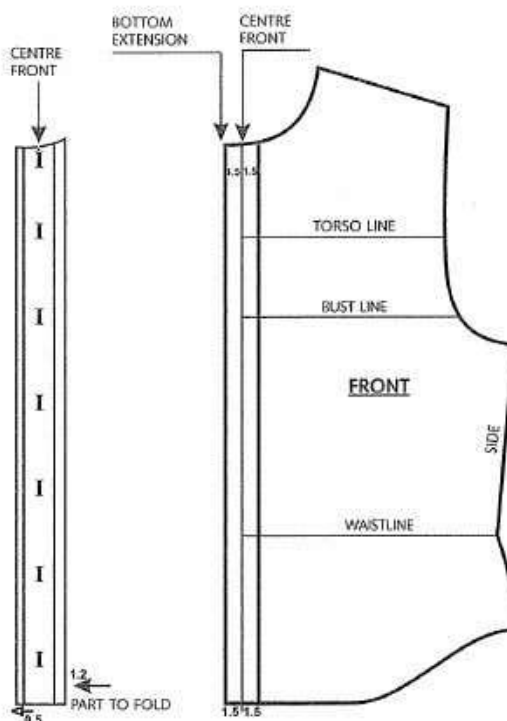
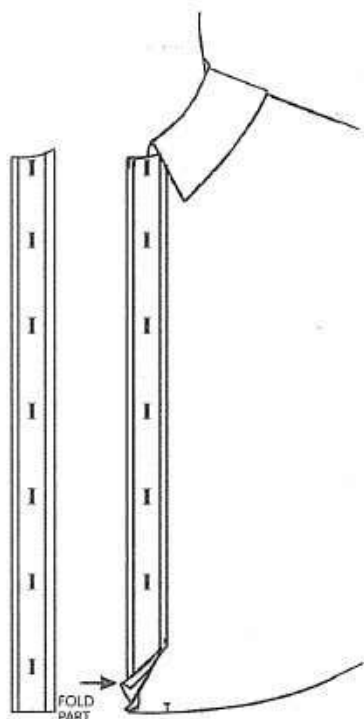
ENLARGED PLACKET

SHIRT PLACKET



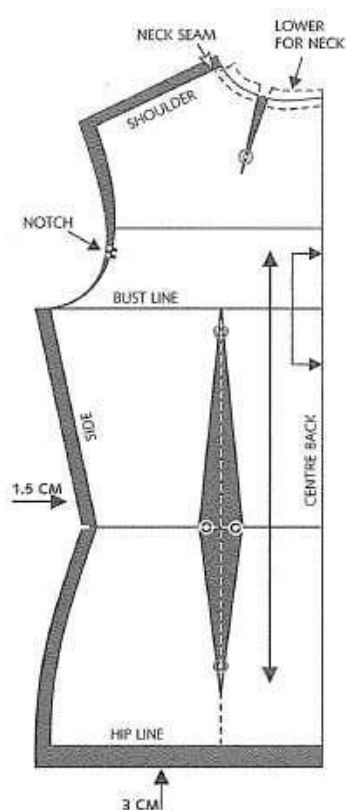
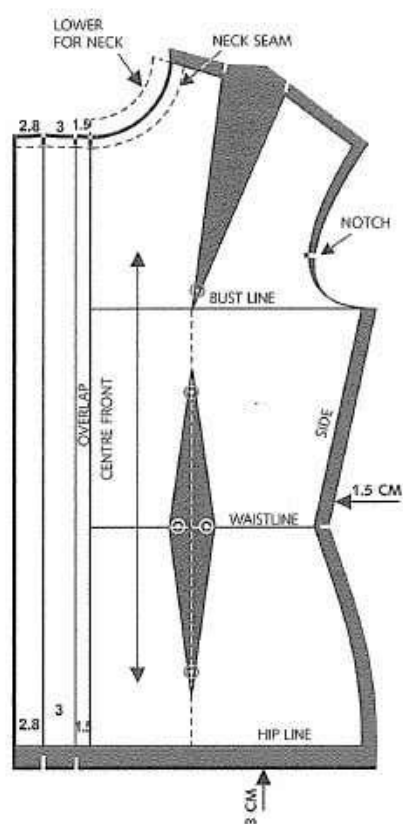
- Draw the placket on the pattern with 6 cm on the shoulder line and 7.5 cm (6 + 1.5 cm extension) from the centre front line.
- Copy the placket outline beyond the centre front.
- Mark off the notches and the grain and join the points to achieve a smooth run.

- Draw the placket on the pattern with 6 cm on the shoulder line and 6 cm from the centre front line.
- Copy the placket outline starting from the centre front line.
- Mark off the notches and the grain and joint the points to achieve a smooth run.



APPLIED STRIP

SEAM ALLOWANCES



After checking all the measurements and marking all the reference points and making the notches, lay the pattern out on the fabric, holding it down with weights or pins. On the centre front there should be enough fabric for the added width of the placket.

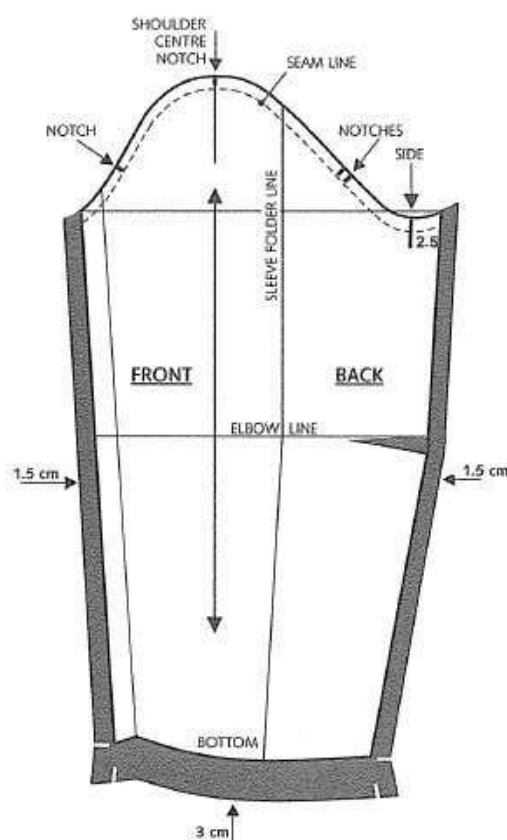
The centre front and the centre back should be on the straight of grain. The centre back should be placed on the fold, as it is seamless.

A seam allowance of 1 cm should be left for the bodice neckline and armhole. The seam allowance for the other parts is shown in the drawing and corresponds to the dress-maker's or industrial production requirements.

Fitting of the sleeve

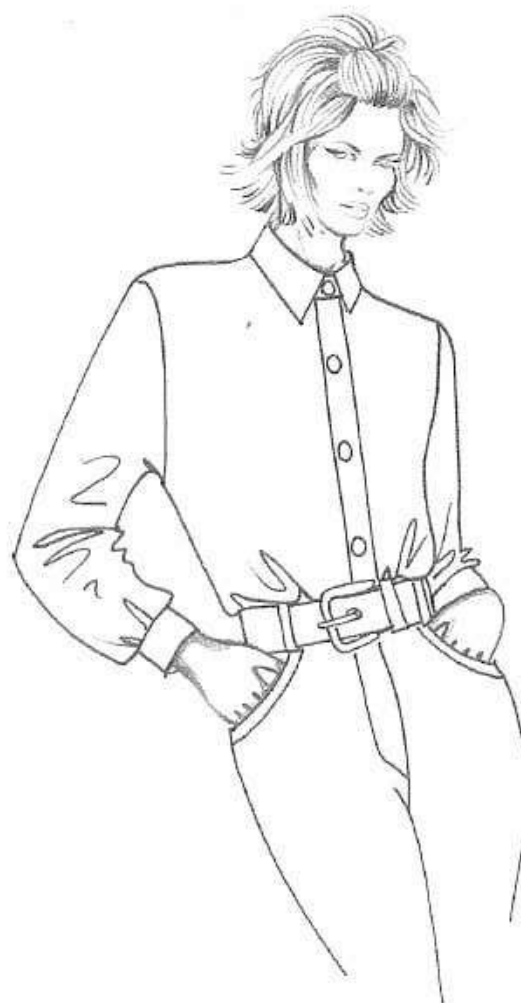
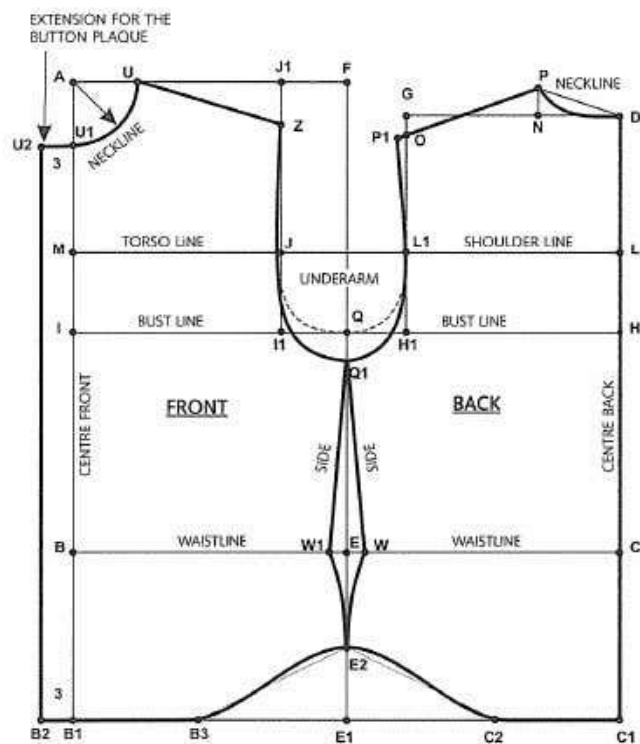
After sewing the sleeve seam and joining the front and back at the side and on the shoulder, the fitting of the sleeve can begin, keeping the bodice inside out and the sleeve right side out. Pin the sleeve to the side seam at the lower part of the armhole, keeping it 2.5 cm forward of the sleeve seam (this distance is only indicative and may be subject to change, based on the patterns or the subject's shape, for obtaining a perfect fit). Then, pin the centre sleeve to the centre of the shoulder seam, and continue pinning it all around, matching the notches, front and back, line up the seam of the sleeve crown with the seam of the loose points of the sleeve.

Make sure that the sleeve crown is 2–4 cm longer than the bodice armhole, depending on the type of fabric and the pattern style.

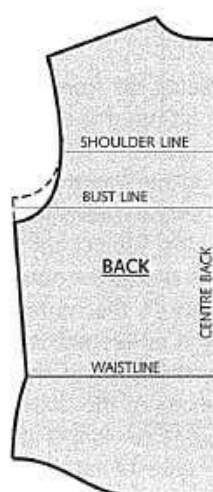
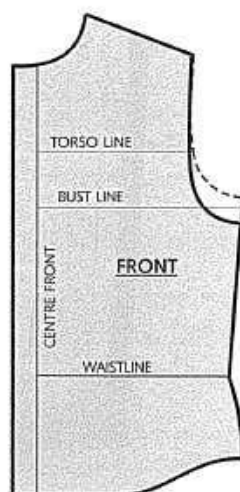


BASIC DARTLESS LOOSE-FITTING SHIRT BLOCK

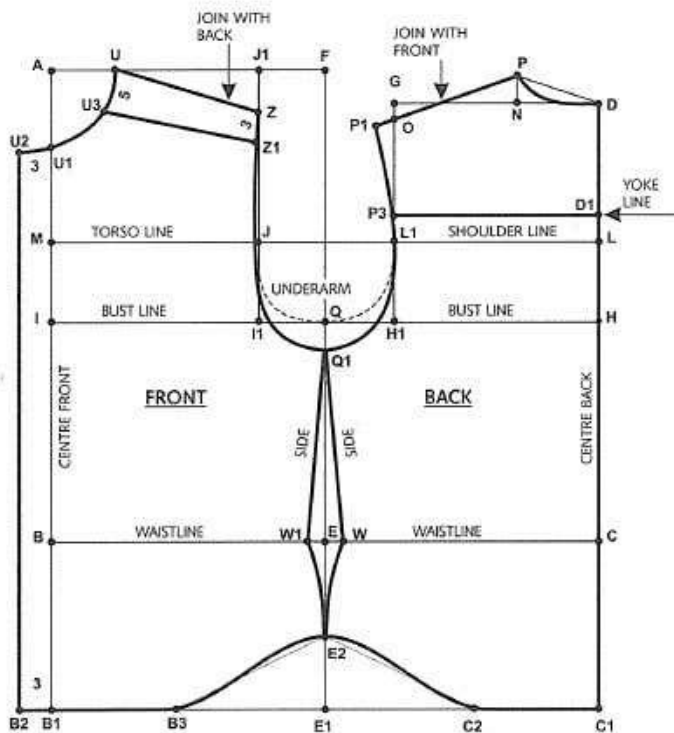
LOOSE-FITTING



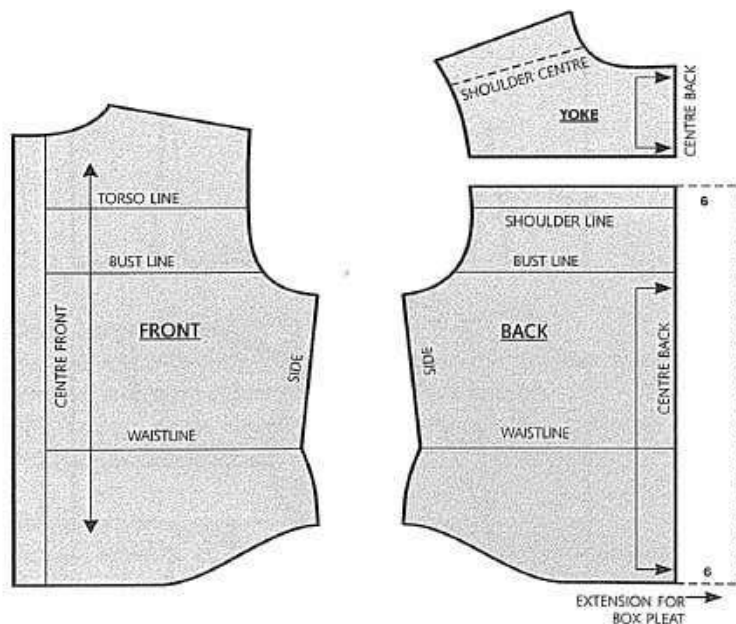
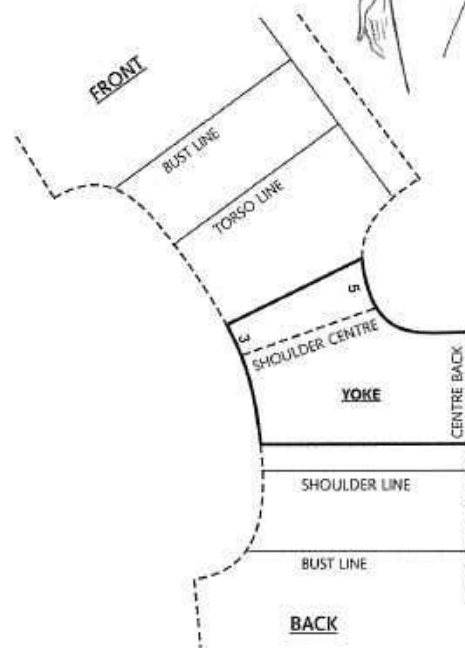
- Make the basic bodice without darts.
- C-C1 = 15-20 cm.
- B-B1 like C-C1.
- C1-C2 = 10 cm.
- B1-B3 like C1-C2.
- B1-B2 = 3 cm.
- E1-E2 = 4-5 cm (as desired or as needed).
- E-W and E-W1 = 1.5 cm (as needed).
- Carefully draw the shape of the tails.
- Lower the armseye as needed and check the sleeve crown measurements.



LOOSE-FITTING SHIRT WITH YOKE



- Draw the basic shirt block without darts (or with darts).
- Draw the front yoke part Z-Z1 3-3.5 cm and U-U3 5-5.5 cm.
- Draw the back yoke part D-D1 and P1-P3 as desired (8-12 cm).
- Join the two parts of the yoke matching the back shoulder with the front, and copy over the entire yoke.



Note: Should you wish to insert a box pleat on the back, you must make an extension of the centre back of the desired length.

CORRECTION OF BODICE DEFECTS

INTRODUCTION

The patterns made with our blocks are designed for the average figure of a type of woman with regular measurements, as shown in the table illustrated in the chapters above.

The measurements and the ease values taken into consideration are those of a size 42 used in industrial production, which, often, does not correspond to the shape of the person to be clothed.

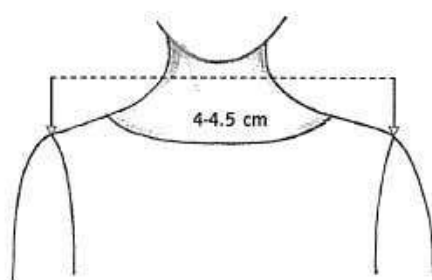
Indeed, while industrial output has measurements and values for the realization of basic modes and size grading is standard, in made-to-measure clothing, the pattern must be made using measurements that correspond to every part of the body. Hence the need to fit the basic bodice pattern well, especially since it is the upper part of the figure that requires perfection in fit and shaping, to have a proper and professional-looking garment.

SHAPING THE SHOULDER LINE

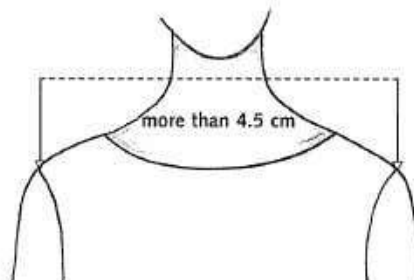
Regular shoulders slope down about 4–4.5 cm between the base neckline and the outside shoulder point, as shown in the figure.

Sloping, or low, shoulders drop more than 4–4.5 cm from the base neckline.

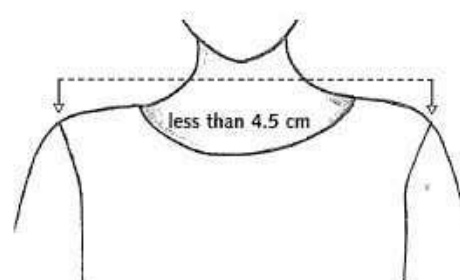
Square, or high, shoulders drop less than 4–4.5 cm from the base neckline.



REGULAR SHOULDERS



SLOPING SHOULDERS



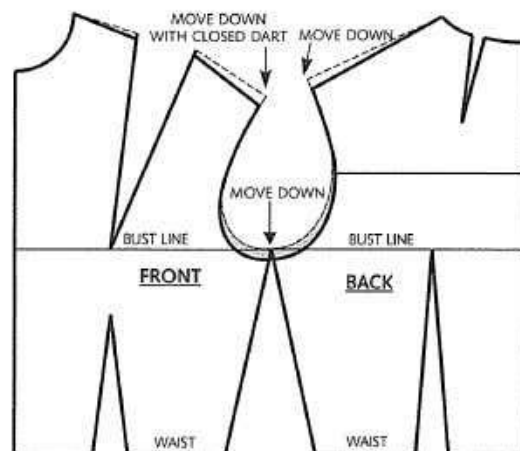
SQUARE SHOULDERS

SLOPING SHOULDERS

To adapt the basic pattern to the subject with sloping shoulders, drop the shoulder point and the underarm point the distance needed, or add shoulder pads, keeping the original slope of the basic model, but regulating the armscye.

Suitable styles

Attire with fitted sleeves, better when slightly full. Shoulders made slightly wider or padded, with back yoke.

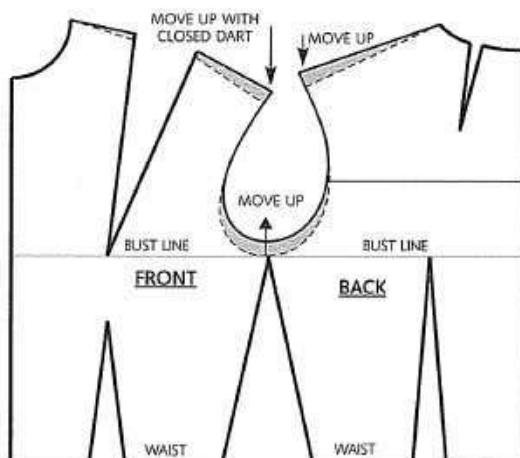


SQUARE OR HIGH SHOULDERS

For subjects with square shoulders, raise the shoulder point and the underarm point on the pattern as needed.

Suitable styles

Raglan, kimono, or fitted sleeves without padding, dropped shoulders, sundress-type bodices. Avoid padding or puffed sleeves.



Note: The shoulder point of the front bodice should be dropped or raised with the bust dart closed, to achieve the right slope.

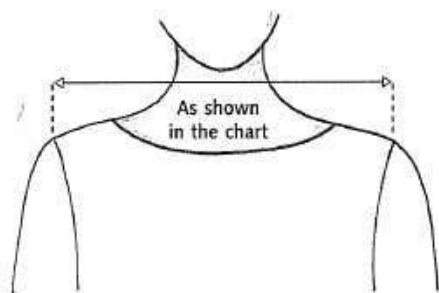
SHAPING THE SHOULDER WIDTH

Shoulders with a regular shape have a width more or less similar to that of the hips, corresponding to the measurements shown in the size chart.

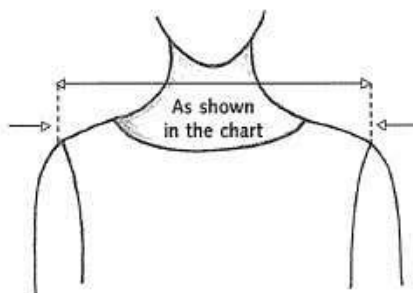
Narrow shoulders have the upper part narrower than the hips

and therefore measure smaller than the standard shown in the size chart.

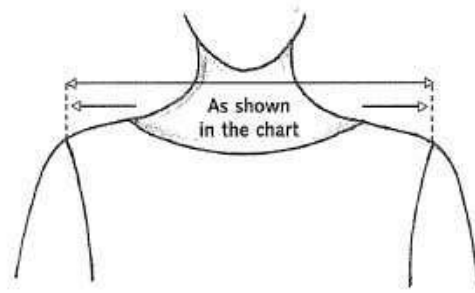
Wide shoulders have the upper part wider than the hips, and therefore measure larger than the standard shown in the size chart.



REGULAR SHOULDERS



NARROW SHOULDERS



WIDE SHOULDERS

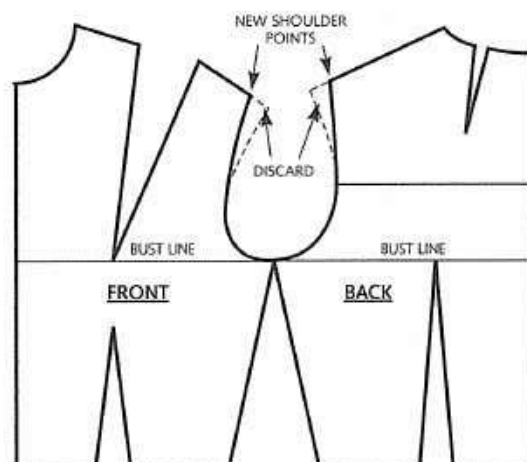
NARROW SHOULDERS

For subjects with narrow shoulders, take in the shoulder point of the model as needed.

The armhole must also be adjusted, raising the underarm in accordance with the shift of the shoulder point.

Suitable styles

The best models are those that fill up the shoulders and bodice, lending a more balanced look: styles with full sleeves, with wide shoulders, loose-fitting bodices, boat necks, or with yokes that ride high on the shoulders and shoulder pads.



WIDE SHOULDERS

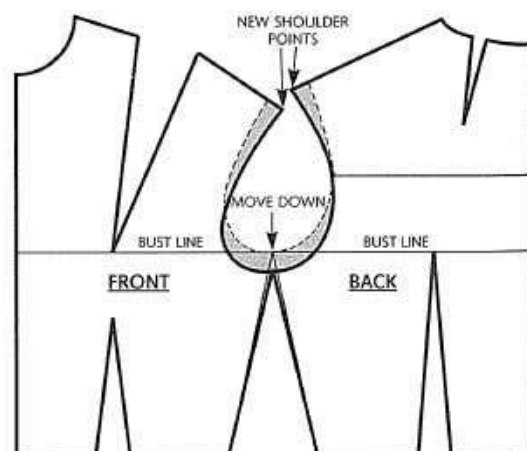
For subjects with wide shoulders, lengthen the shoulder point and the underarm points of the pattern as needed.

The armhole needs adjustment, making sure that it can accommodate the sleeve crown.

Suitable styles

Raglan, kimono, or fitted sleeves without padding, dropped shoulders, sundress-type bodices.

Avoid puffed sleeves and shoulder pads.



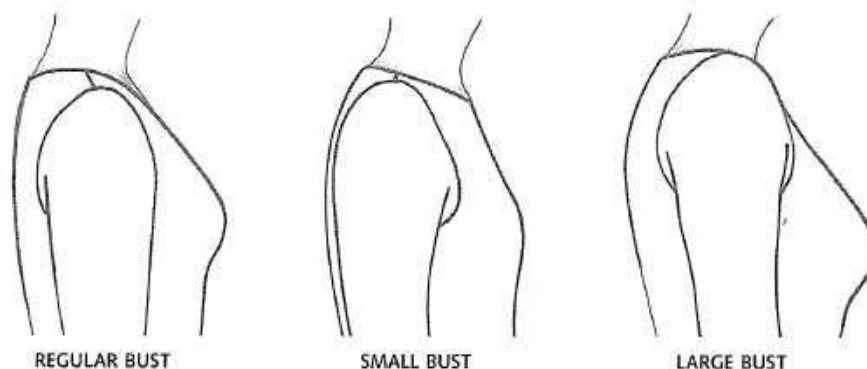
CORRECTION OF BODICE DEFECTS

BUST SHAPE

A regular bust has a gently rounded silhouette, dresses a B-cup bra, and the difference between bust circumference and the torso circumference is calculated at 6.5 cm.

The small bust is barely curved in silhouette, or not at all, and dresses a less-than B-cup bra.

The large bust shows generous curves and dresses a C-cup bra or larger.



REGULAR BUST

SMALL BUST

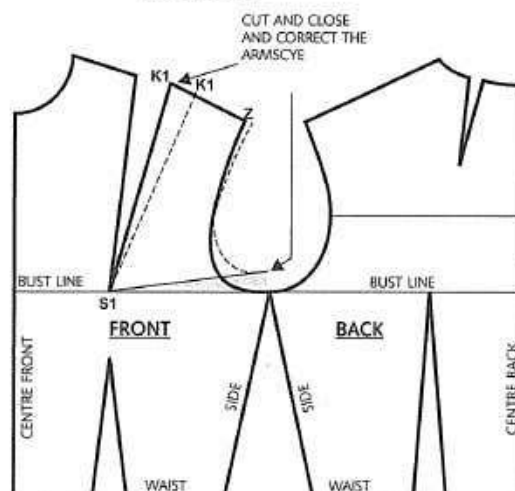
LARGE BUST

SMALL BUST

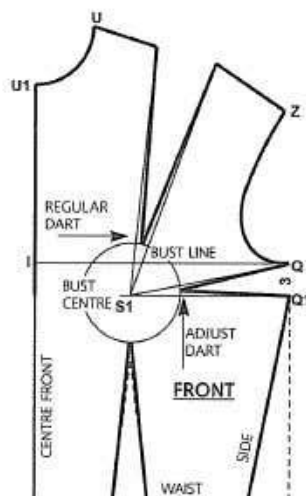
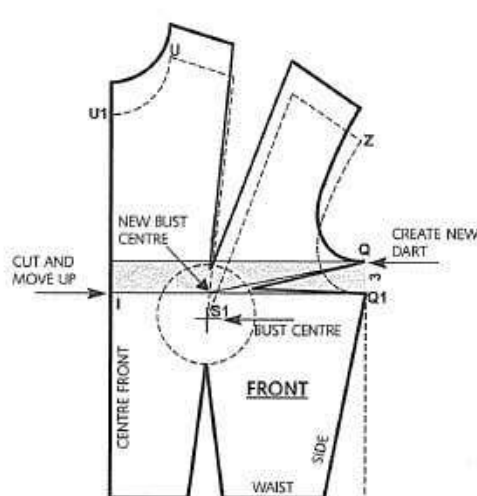
For subjects with a small bust, the pattern should be altered by reducing the depth of the bust darts and, as a consequence, the shoulder point is moved by the same distance, as shown in the figure.

SUITABLE STYLES

Styles with yokes or shoulder seams, with tiny gathers or soft pleats on the bust line; Empire-style attire; dresses with seams that start from the armseye; double-breasted or asymmetrical styles.



SMALL BUST



LARGE BUST

LARGE BUST

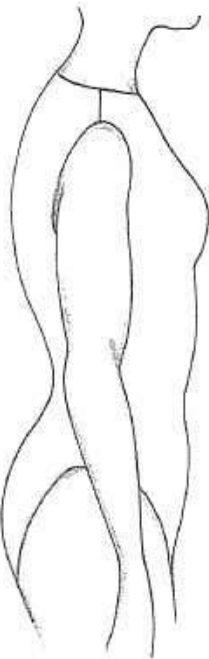
For subjects with a large bust, the following alterations can be made to the pattern:

- Lower the bust point by 3 cm.
- Slash the pattern along the I-Q bust line and raise the upper part as needed (e.g.: 3 cm).

- Create a second Q-S1-Q1 dart at the underarm point of the same measure as previously raised (e.g.: 3 cm).
- Reset the dart tips.

SUITABLE STYLES

Dresses with panels from the shoulders; V-necks; kimono sleeves; side splits or vertical lines.

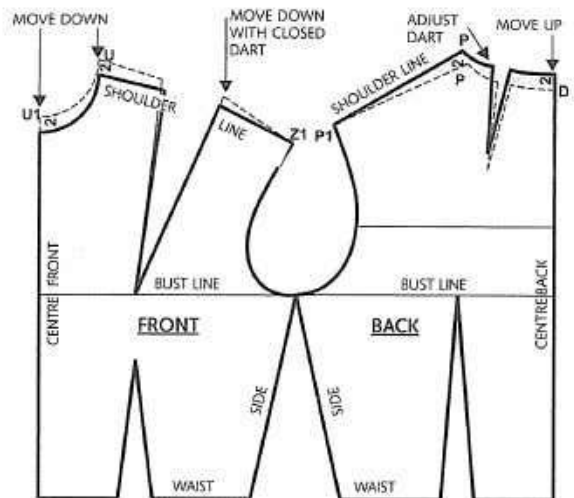


CURVED BACK

CURVED BACK

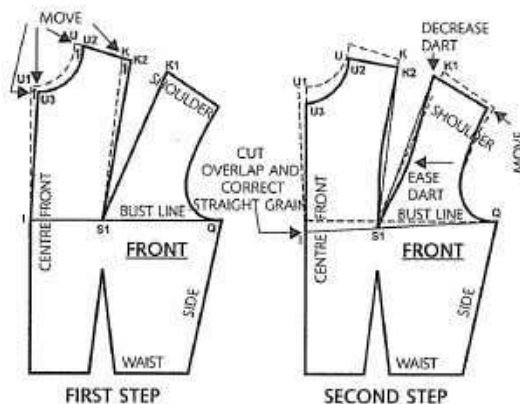
In subjects with a curved back, the back is longer than the front, so the pattern must be altered on both the front and the back.

- Lower the centre front line to point U1; and the shoulder point to point U, by the length required (e.g.: 2 cm).
- Join U and Z1 with closed dart.
- Raise the centre back to point D, and the shoulder point to point P, by the same length as on the front (2 cm).
- Join P and P1.



CURVED BACK

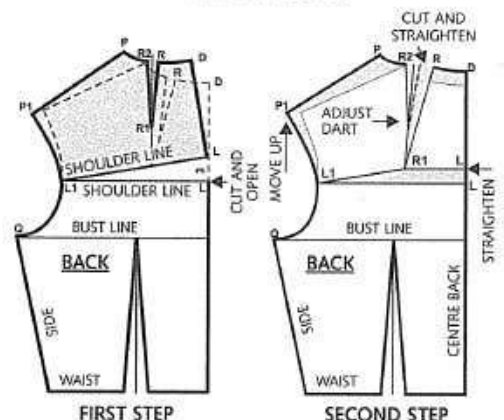
FRONT CORRECTION



FIRST STEP

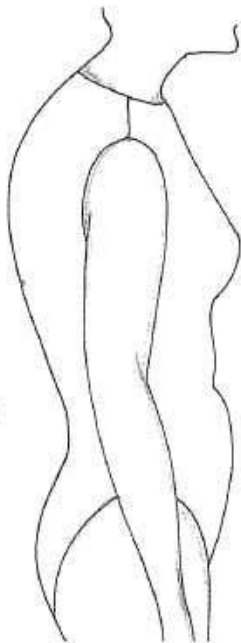
SECOND STEP

BACK CORRECTION



FIRST STEP

SECOND STEP



ROUNDED BACK

ROUNDED BACK

ROUNDED OR HUNCHBACK

For subjects with a rounded back, typical of the elderly, the pattern must be altered on both the back and the front, as the back is much longer than the front.

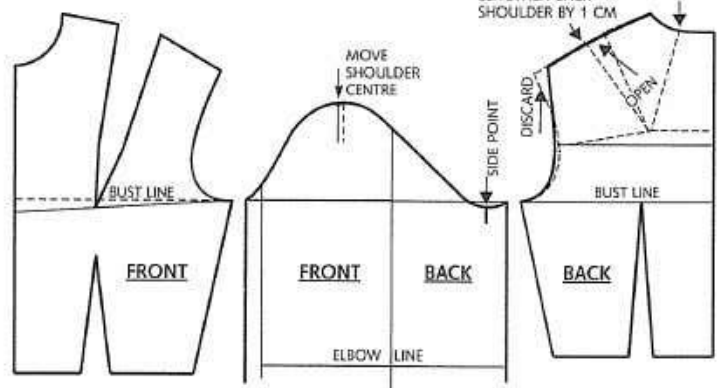
Front

- Move points U and U1 on the centre front neckline, and point K on the bust dart by 1 cm.
- Join I-U1 and S1-K2.
- Slash from Point I to point Q and turn the entire upper part, pivoting on Q, until reaching the straight of grain of the centre front.
- Adjust the dart.

Back

- Slash along the L-L1 shoulder line and raise point L rotating it on point L1, by the amount needed (e.g.: 3 cm).

SLEEVE ADAPTATION



- Slash along the R-R1 line and open the dart as far as the straight grain of the centre back D-L.
- Adjust the height of the neck dart as needed.
- The shoulder length of the back is 1 cm longer than the front.

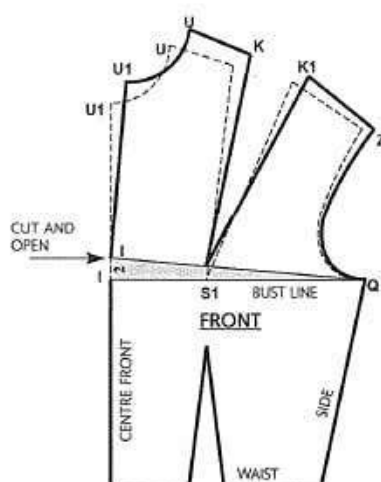
Sleeve

As a result of the bodice alterations, the centre shoulder of the sleeve has to be shifted and the entire sleeve crown has to be adjusted, an operation to be carried out on the individual, based on the extent of the alteration.

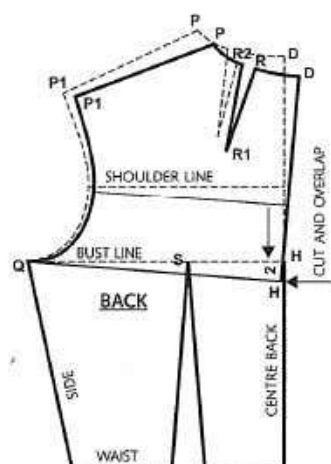
CORRECTION OF BODICE DEFECTS



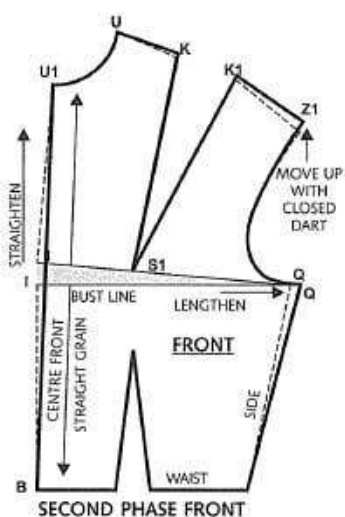
SWAYBACK



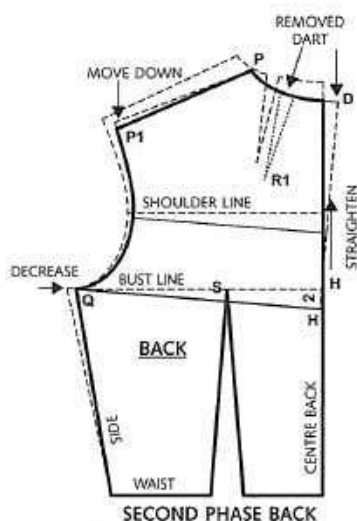
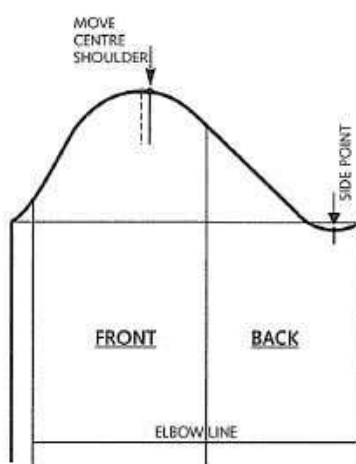
FIRST PHASE FRONT



FIRST PHASE BACK



SECOND PHASE FRONT



SECOND PHASE BACK

SWAYBACK AND FLATBACK

For subjects with a swayback, the pattern has to be altered on both the front and the back, because the front is longer than the back, the arms are thrust back, the chest is broader and fuller, while the back is flat and contracted.

First phase front

- Slash along the I-Q bust line and raise point I rotating the entire upper part on point Q, by the amount needed (e.g.: 2 cm).

Second phase front

- Join U1-B and set the pattern on the straight of grain, or, if the fabric is soft, simply pull it to the straight grain.
- Raise the second shoulder point Z1 as needed, to lengthen the front armhole and slightly widen to Q for the armhole shaping.
- Adjust the height of the bust dart as needed.

First phase back

- Slash along the H-Q bust line and overlap H, rotating the entire upper part on point Q by the length added to the front.

Second phase back

- Return the centre back H-D to the straight of grain, eliminating the neck dart.
- Lower the second shoulder point P1 as needed and turn in slightly to Q for the armhole shaping.

Sleeve

As a result of the bodice alterations, the centre shoulder of the sleeve has to be shifted and the entire sleeve crown has to be adjusted, an operation to be carried out on the individual, based on the extent of the alteration.

SHIRT COLLARS AND NECKLINES



Necklines	168	Collars for plunging necklines	180
Round neckline	168	Square middy's collar.	181
"V-neck".	169	Mandarin collar.	182
Square neck	169	Ring collar	183
Asymmetrical neckline	170	Crater collar	184
Boatneck	171	Bandeau neck inset sleeves	185
Fancy "V-neck".	171	Bandeau neck kimono sleeves.	186
Heart neckline	171	Shawl collar	187
Raised neckline	172	Halter top with lapels	188
Soft high neckline	173	Flat shawl collar.	188
Cowl neckline.	173	Double-breasted shawl collar	189
Deep cowl neckline	174	Jabot shawl collar.	189
Back cowl neckline	175	Sports collar.	190
Collars	176	Fancy collars	191
Basic collar block for shirt.	177	Facings.	195
Banded shirt collars	178	"Polo" openings.	197
Flat collars.	179	Fancy collar exercises	198

NECKLINES

INTRODUCTION

Necklines are always in the limelight, close up to the face in every garment, and thus they are a fundamentally important feature in terms of both their appearance and, especially, their wearing comfort, and the way that the whole garment falls and fits.

If it fits correctly, the neckline must rest softly on the chest without lifting or wrinkling.

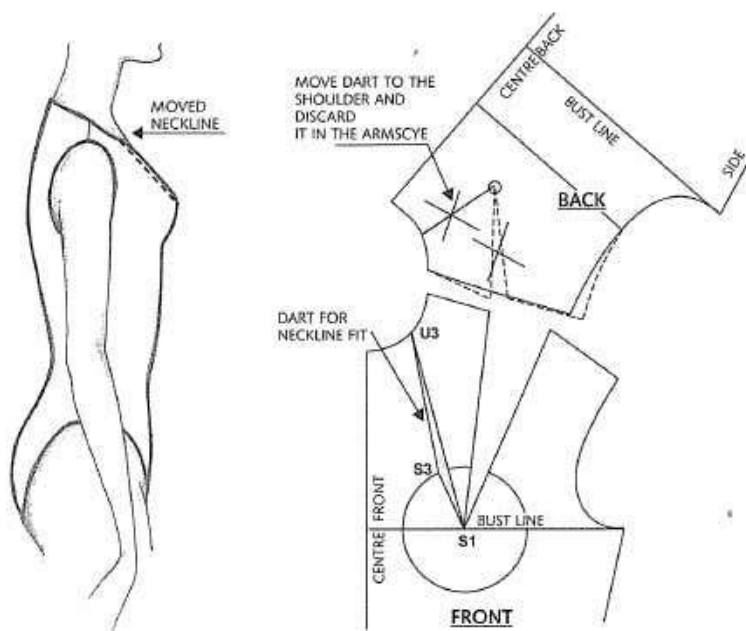
To obtain this, you must make small technical adjustments to the patterns with regard to the pattern position, which we shall now explain.

LOW NECKLINE

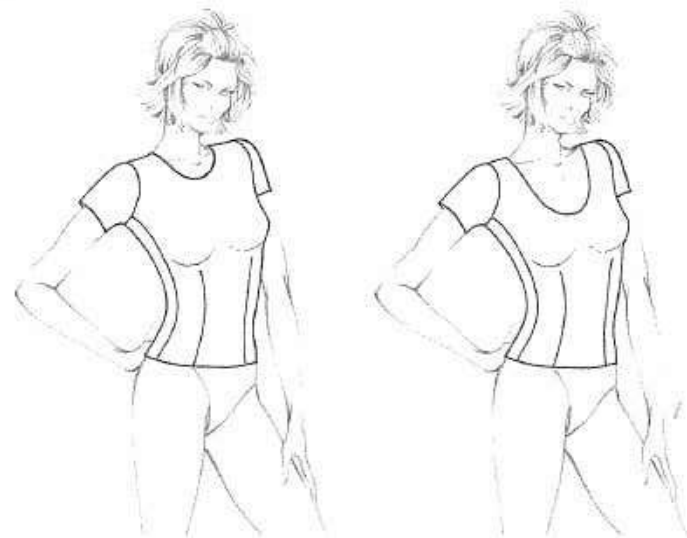
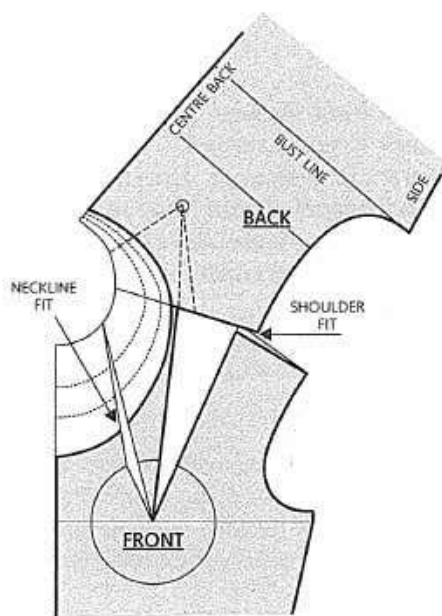
Low necks do not usually plunge in the same way on both the front and the back, but, they are almost always lower in front and higher in back, or vice versa. Before making a low neckline:

1) Move the rear neck dart to the shoulder and then discard it in the armseye or, if there is a back seam, in the centre back.

2) Make a dart U3-S1-S3 in the front, 1-1.5 cm in width, as shown in the figure, that will serve to fit the neckline and avoid the formation of gaps or wrinkles.



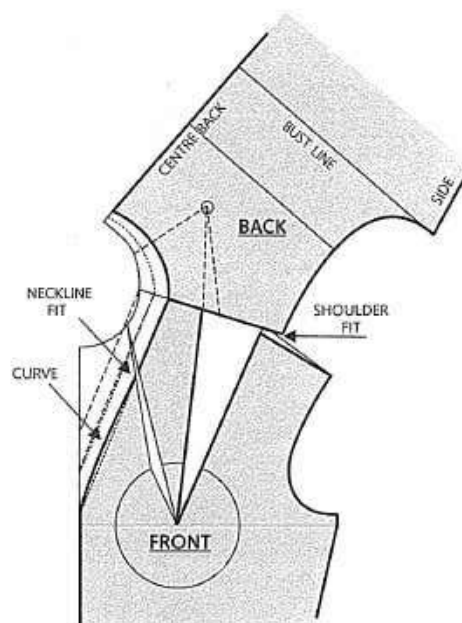
ROUND NECKLINE



After moving the rear dart and taking up the dart in front, proceed as follows:

- Place the back on top of the front, matching the shoulder and the neckline.
- Trace the neckline with the desired depth, both in front and in back.
- Separate the back from the front.
- Make a small tuck in the front at the point where the dart is, to avoid the formation of gaps.

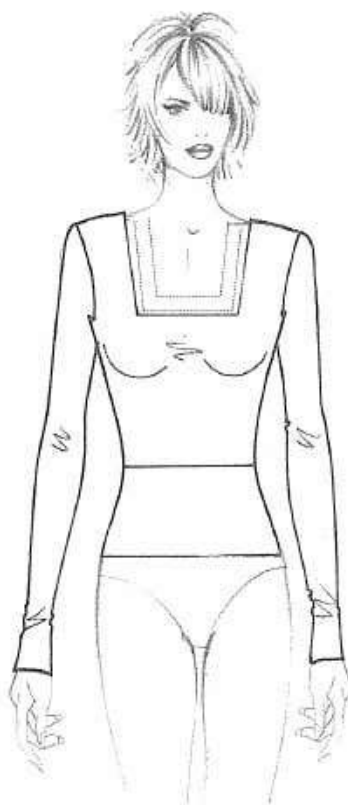
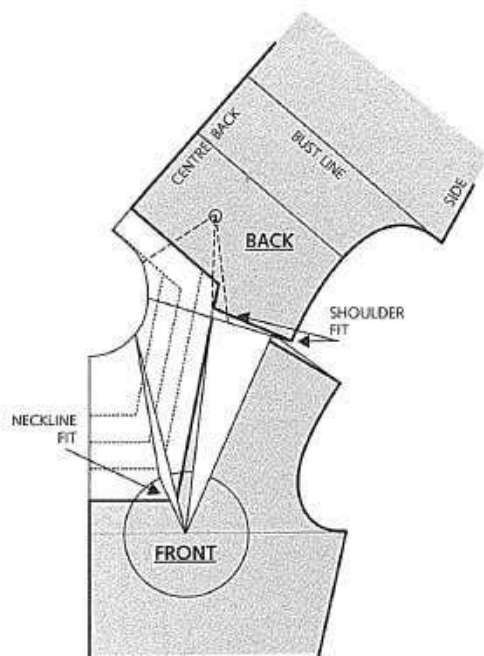
"V-NECK"



After following a procedure similar to that for the round neck, draw the V-neck to the desired depth.

Note: Styles with this kind of neckline are usually drawn with a slight curve in the bust point area, as V-necks tend more than others to stretch away from the centre front when worn. The curvature increases along with the depth of the neckline.

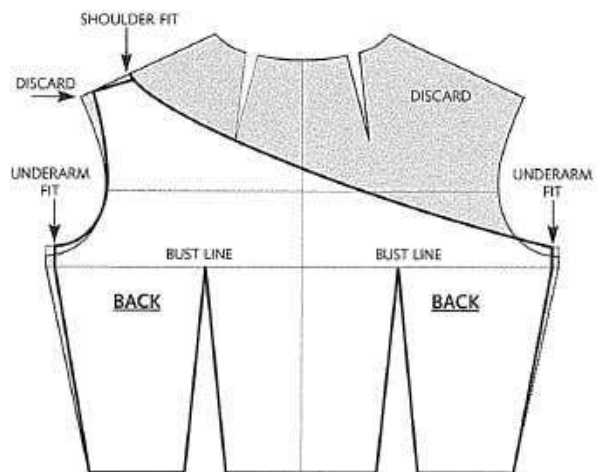
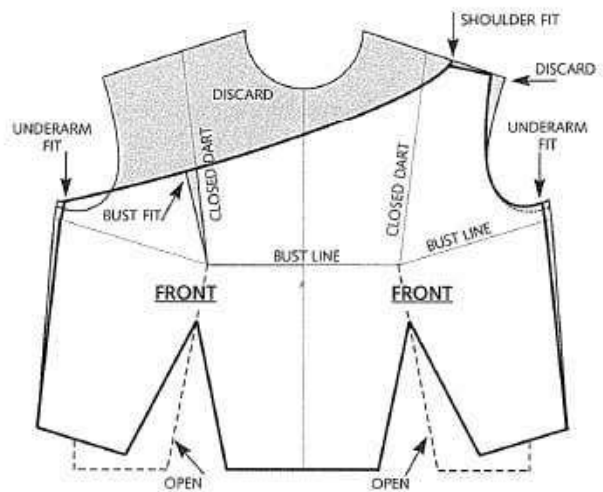
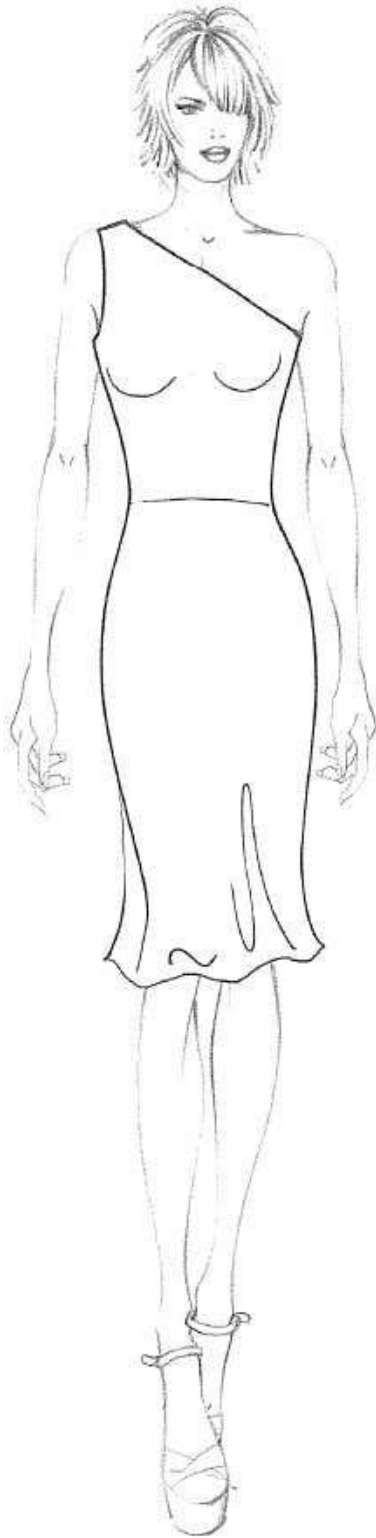
SQUARE NECK



Square necks are made paying attention to the corner areas and the shoulders.

In these points, the fit has to be carefully checked, taking in millimeters if needed to avoid gaps and creasing.

ASYMMETRICAL NECKLINE



With asymmetrical necklines the right and left sides have different shapes.

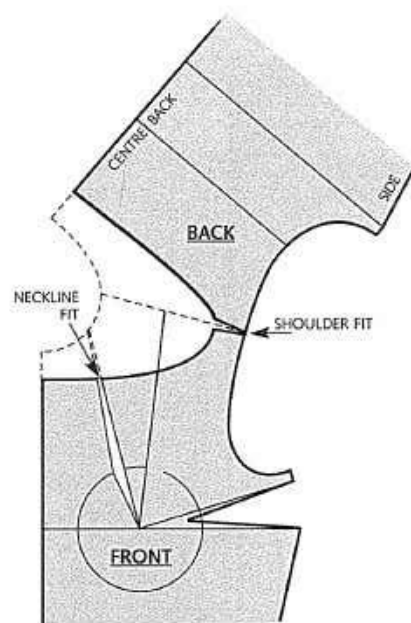
The asymmetry may involve only the front, or only the back, or, much more rarely, the front and the back.

- Draw the neckline on the whole pattern block of the front and the back, already modified as desired.

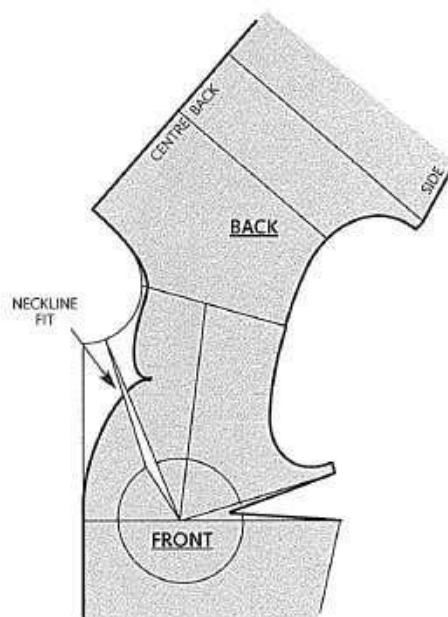
Check that the width of the shoulders is the same in the front and the back.

Trace off the pattern and the neckline.

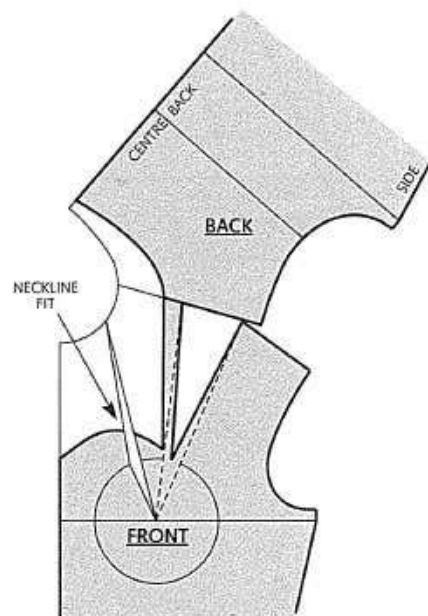
BOATNECK



FANCY "V-NECK"



HEART NECKLINE



RAISED NECKLINE



The raised neckline has the form of a standing yoke, and its edge is higher than a normal neckline.

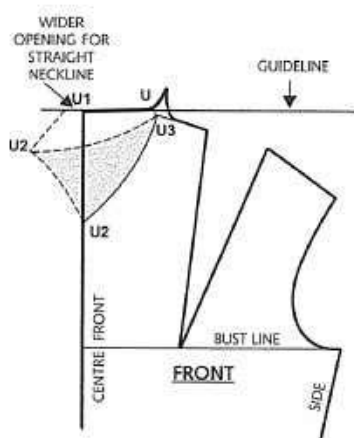
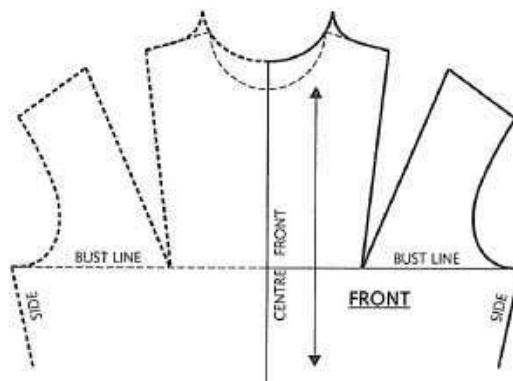
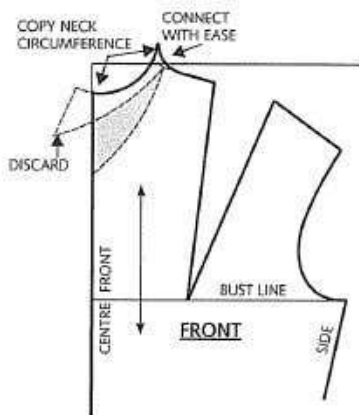
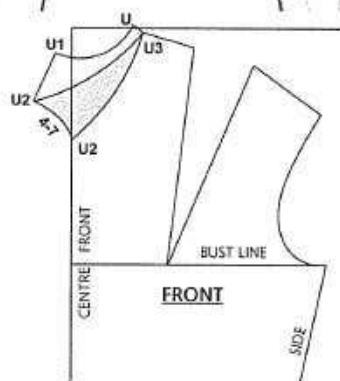
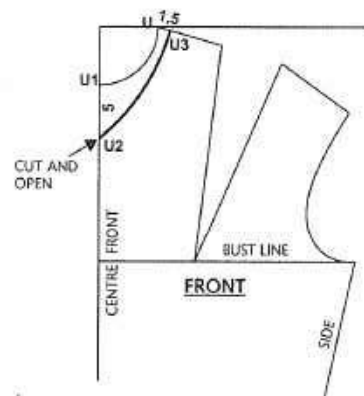
- Draw the basic bodice block with the necessary measurements and ease, and separate the two parts.

Front

- Draw a curved line in the neckline area with U-U3 1.5-2 cm, and U1-U2 4.5-5 cm.
- Slash along this line and rotate the upper part pivoting from point U3, for the desired measure (e.g.: 5-7 cm).

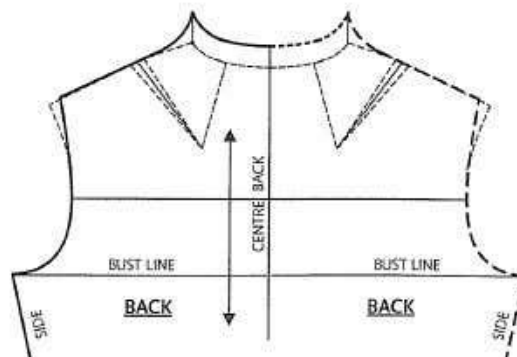
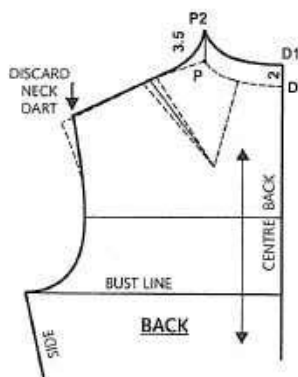
The rotation can reach the position where the collar point squares off, giving a straight line to the front of the neck.

- Copy the above neck measurement and join the lines as shown in the figure.

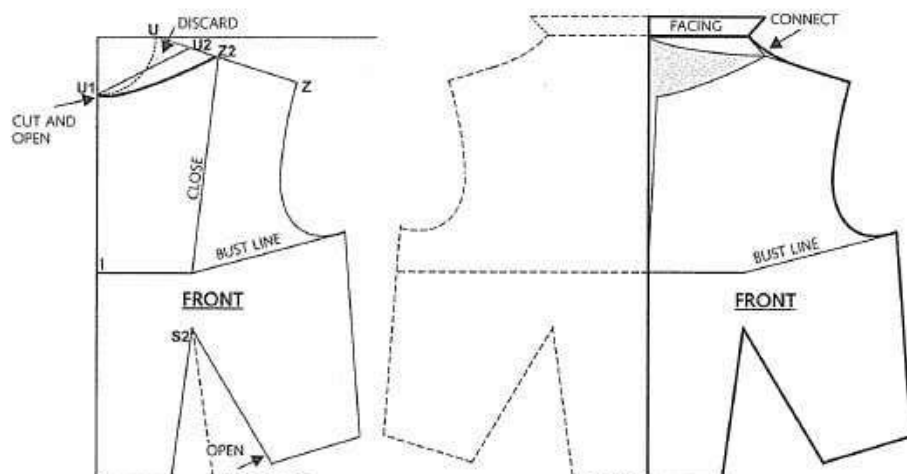


Back

- Eliminate the neck dart.
- Raise the point P by 3-3.5 cm.
- Raise the point D by 1.5-2 cm.
- Make a smooth run between the shoulder line and the neckline.
- Check that shoulder measure matches that of the front.



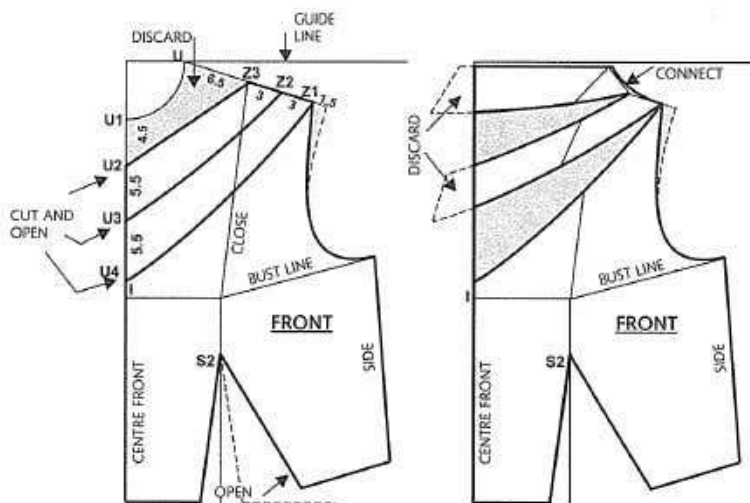
SOFT HIGH NECKLINE



- Draw the basic bodice block with the necessary measurements and ease.
- Close the front bust dart, suppressing it in the waist dart, and eliminate the back neckline dart, shifting it to the edge.
- Draw the squared guideline on the neckline.

- Draw the point U2 2-3 cm from U.
- Draw the point Z2 2-3 cm from U2.
- Join U1-U2 and discard the part.
- Join U1-Z2 with a curved line.
- Cut U1-Z2 and open until the squared guideline.

COWL NECKLINE



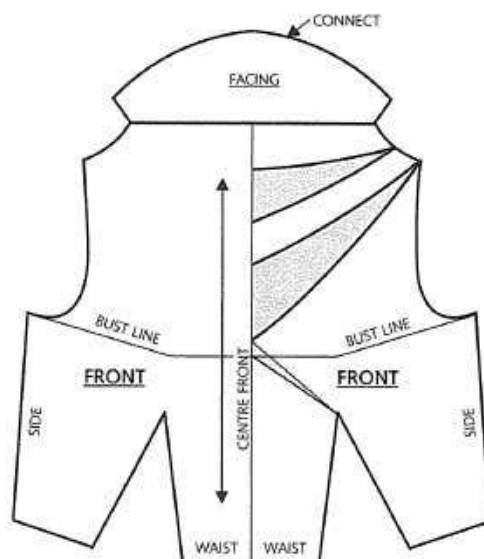
- Trace the basic bodice block with the necessary measurements and ease.
- Close the front bust dart, suppressing it in the waist dart, and eliminate the back neckline dart, shifting it to the edge.

Front

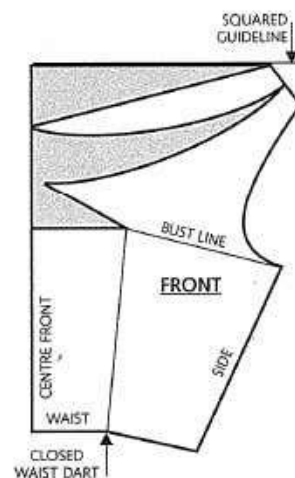
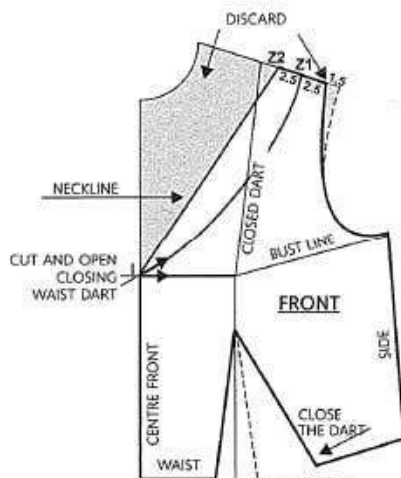
- Draw the squared guideline on the neckline.
- Draw the neckline U2-Z3 to the desired depth and height.
- Draw two curved lines U3-Z2 and U4-Z1 about 5.5 cm apart, slash along these lines and open them as far as the squared guideline.
- Connect lines as shown in figure.
- Draw the facing, if called for.

Back

- After closing the neck dart and suppressing it in the edge, trace off the outline of the neck as desired.
- Lower the shoulder line by about 1 cm for a snugger fit.



DEEP COWL NECKLINE



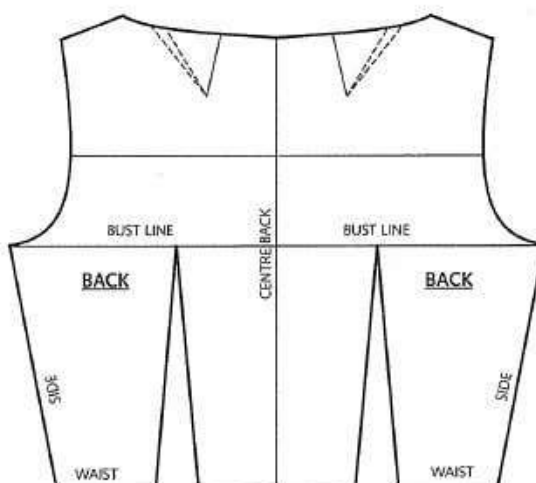
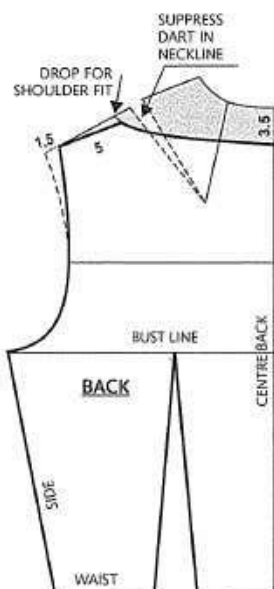
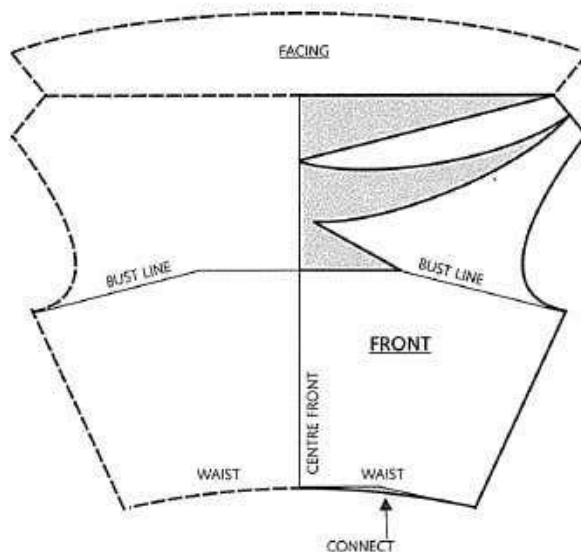
- Draw the basic bodice block with the necessary measurements and ease.
- Close the front bust dart suppressing it in the waist dart, and eliminate the back neckline dart, shifting it to the edge.

Front

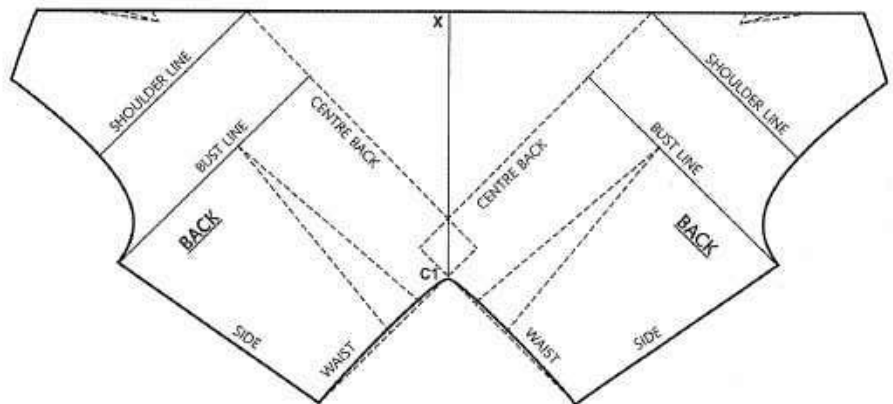
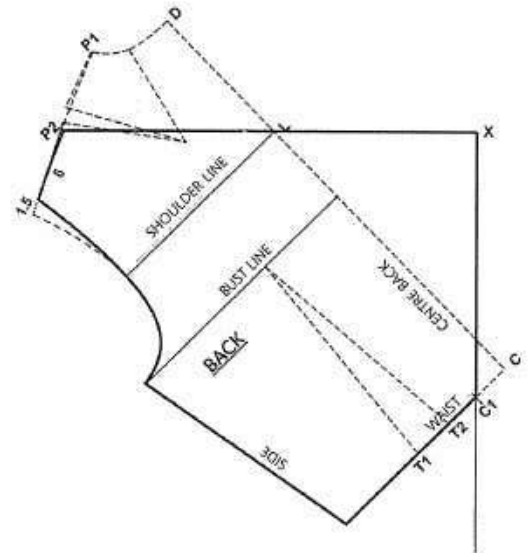
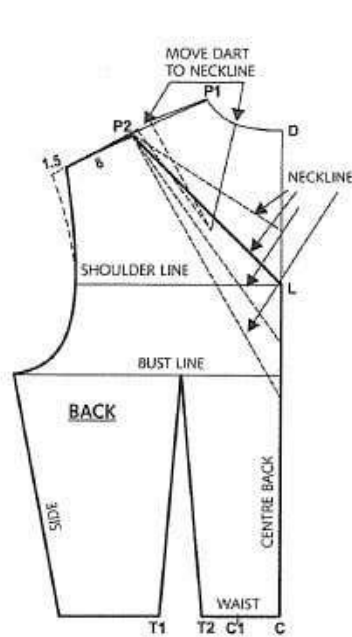
- Draw the squared guideline on the neckline.
- Draw the neck with desired depth and height I-Z2.
- Draw of a curved line I-Z1 at about half the shoulder's width; slash along this line and along the bust line and open them as far as the squared guideline, closing the waist dart.
- Connect lines as shown in the figure.
- Draw the facing, if called for.

Back

- After closing the neckline dart and suppressing it in the edge, draw the outline of the neck as desired.
- Drop the shoulder line by 1 cm for a better fit.

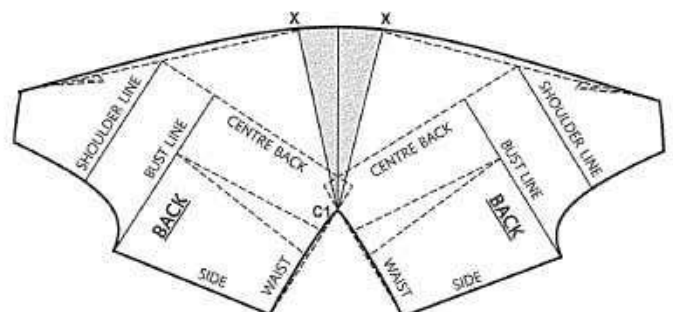


BACK COWL NECKLINE



- Draw the basic bodice block with the necessary measurements and ease.
- Close the back neck dart and open it on the shoulder suppressing it in the armseye.
- Draw the neckline P2-L to the desired height.
- Draw C-C1 like T1-T2.
- Make a squared P2 with C1, as shown in the figure.
- Copy it and lay it out on the folded fabric on the side C1-X.

If a richer cowl is desired, pivot the pattern on point C1 as far as desired (4-6 cm) and draw the curve.



RICHER NECKLINE

COLLARS

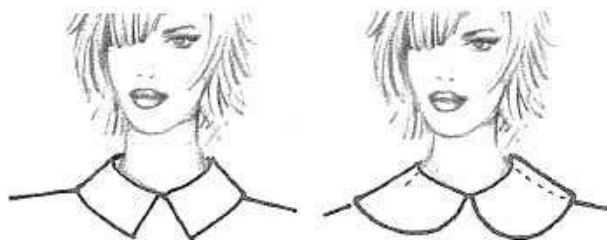
INTRODUCTION

Collars, like necklines, are in the limelight, close up to the face in every garment, and thus a fundamentally important feature. To obtain a "professional" result, you have to make the patterns following certain technical rules, both in the design and in the positioning on the neckline.

TYPES OF COLLARS

There are essentially four types of collar: 1) *flat collars*; 2) *standing collars*; 3) *shirt collars with edge or band*; 4) *shawl collars*.

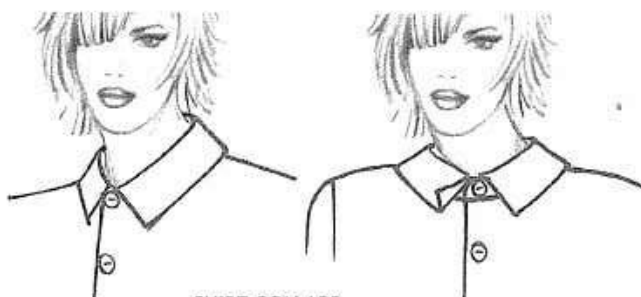
- Flat collars do not have a stand.
- Banded shirt collars can have a low band or a high band (no higher than the collar).
- Standing collars have the band but not the collar.
- Shawl collars are an integral part of the front bodice, so that the placket folds outwards and becomes the revers and the top collar, and there is a seam in the centre back.



FLAT COLLARS



STANDING COLLARS



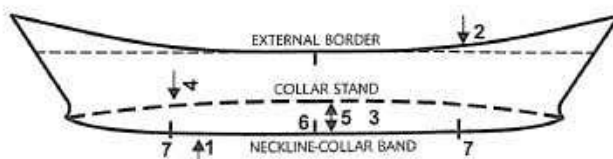
SHIRT COLLARS

SHAWL COLLARS

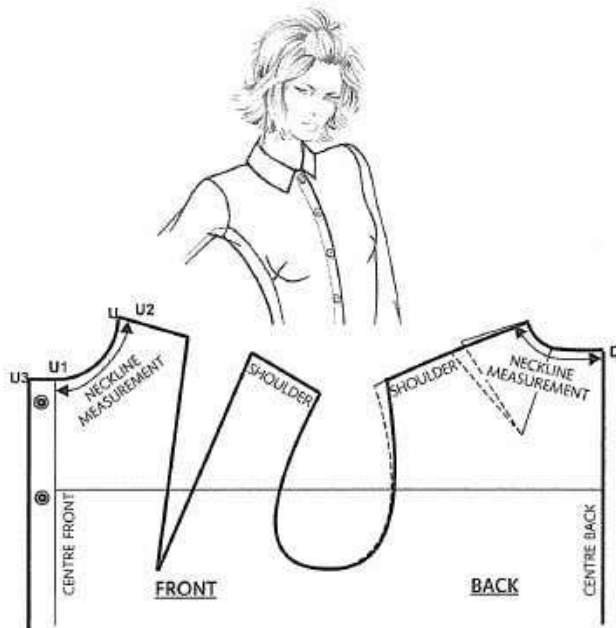


COLLAR TERMINOLOGY

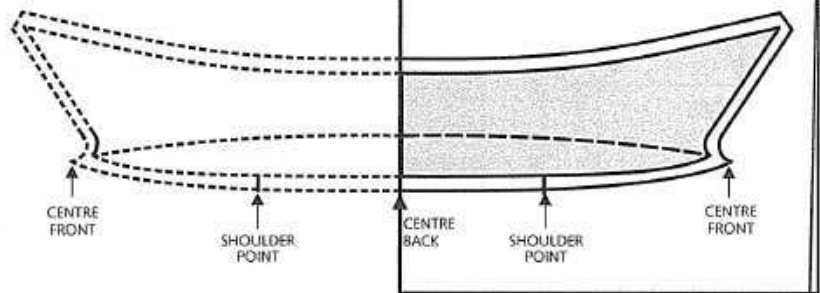
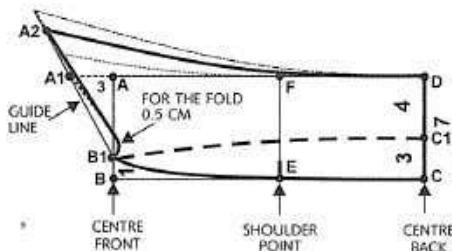
- 1) Neckline - The collar band.
- 2) External border of collar - Style line - Collar shape
- 3) Collar stand - Collar support - Edge or band.
- 4) Seam line collar stand (if detached).
- 5) Collar stand height.
- 6) Centre back collar seam.
- 7) Shoulder point.



BASIC COLLAR BLOCK FOR SHIRT

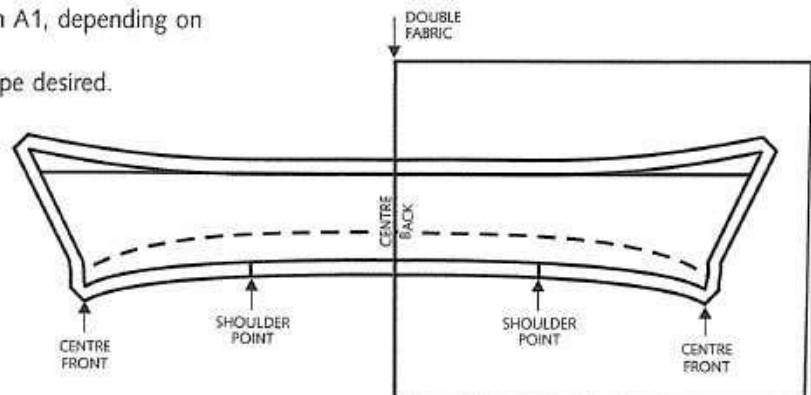
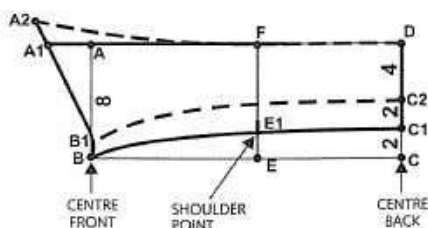


- Move the bodice décolleté dart to the collar band (at the base of which the collar will be attached) and measure the neckline in front and in back.
- Draw a rectangle A B C D with A B equal to the total collar height and BC equal to half the neck circumference + 0.5 cm.
- Mark the point E between C and B at a distance equal to half the back neckline (e.g.: 8 cm) mark the point E.
- Draw the vertical line E F.
- Mark point B1 at 1 cm above B.
- Join B1 E with a curved line.
- Between C and D, create point C1 at 2.5-3 cm above C.
- Join C1 and B1 with a curved line.
- Extend the line 3 cm beyond A and create A1.
- Draw the guideline A-A2 passing through A1, depending on the desired length of the collar point.
- Join A2-F-D with a curved line, or the shape desired.

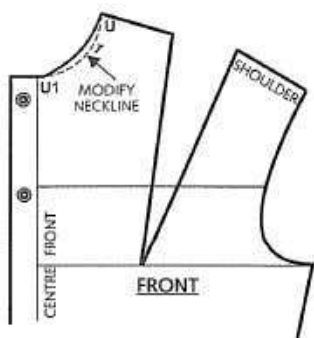


COLLAR FOR WOMAN'S SHIRT PLUS REVERS

- Draw a rectangle A B C D, with AB equal to the total collar height+ 2 cm (e.g.: 6 + 2 = 8 cm) and BC equal to half the neck circumference + 0.5 cm.
- Mark the point E between C and B at a distance equal to half the back neckline (e.g.: 8 cm) mark the point E.
- Draw the vertical line E F.
- 2 cm above C create point C1.
- Join B-E1-C1 with a curved line.
- Between C1 and D, create point C2 at 2-2.5 cm above C.
- Mark point B1 at 1 cm above B. Join C2 and B1 with a curved line.
- Extend the line 3 cm beyond A and create A1.
- Draw the guideline B1-A2 passing through A1, depending on the desired length of the collar point.
- Join A2-F-D with a curved line, or the shape desired.

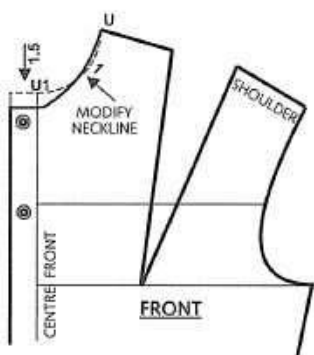
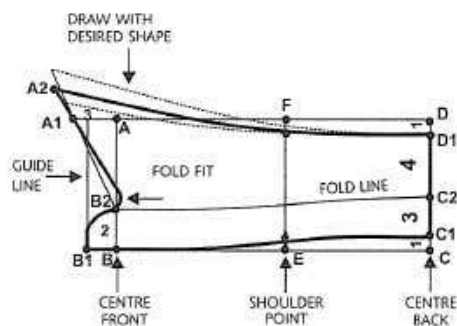


BANDED SHIRT COLLARS



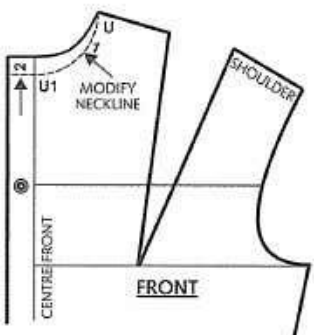
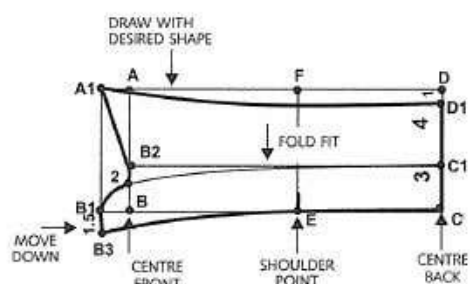
COLLAR WITH ATTACHED BAND

- Modify front neckline as shown in the figure.
- Draw a rectangle A-B-C-D with:
- A-B total neckline height + 2 cm (e.g.: neckline 4 + banded 3 + 2 = 9 cm)
- B-C ½ neckline as bodice front and back.
- C-C1 = 1 cm.
- C1-C2 = 3 cm.
- C2-D3 = 4 cm.
- B-B2 like C1-C2.
- B-B1 = 2-2.5 cm.
- A-A1 = 3 cm.
- Draw the guideline B2-A2.
- C-E like rear bodice neckline.
- Connect points as shown in the figure.



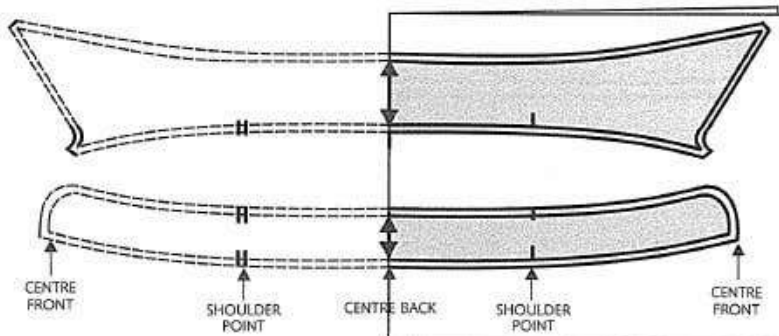
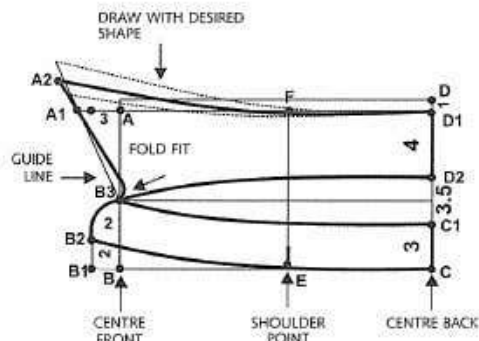
OFF-THE-SHOULDER COLLAR

- Modify front neckline as shown in the figure.
- Draw a rectangle A-B-C-D with:
- A-B total neckline height + 1 = (e.g.: 8 cm).
- B-C ½ neckline like bodice front and back.
- C-C1 = 3 cm.
- C3-D1 = 4 cm.
- B-B2 like C-C1.
- B-B1 = 2-2.5 cm.
- B1-B3 = 1.5 cm.
- A-A1 = 2-3 cm.
- Draw the guideline B2-A1.
- C-E like bodice rear neckline.
- Connect points as shown in the figure.



COLLAR WITH DETACHED BAND

- Modify front neckline as shown in the figure.
- Draw a rectangle A-B-C-D.
- A-B neckline height + band + 4.5 cm (e.g.: 4 + 3 = 7 + 4.5 = 11.5 cm).
- B-C ½ neckline like bodice front and back.
- C-C1 = 3 cm.
- C1-D2 = 3.5 cm.
- D2-D1 = 4 cm.
- B-B1 = 2-2.5 cm.
- B-B3 = 4.75 cm.
- A-A1 = 3 cm.
- Draw the guideline B3-A1.
- C-E like bodice rear neckline.
- Connect points as shown in the figure.



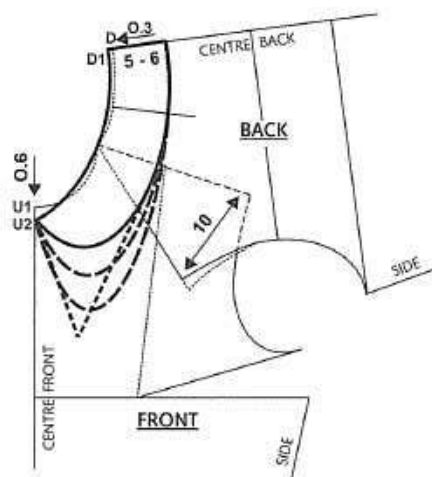
FLAT COLLARS

Flat collars lie flat on the shoulders, keeping the same measurements and the same curves of the neckline to which they will be attached, so thus, they are a copy of the areas of the front and the back that they cover.



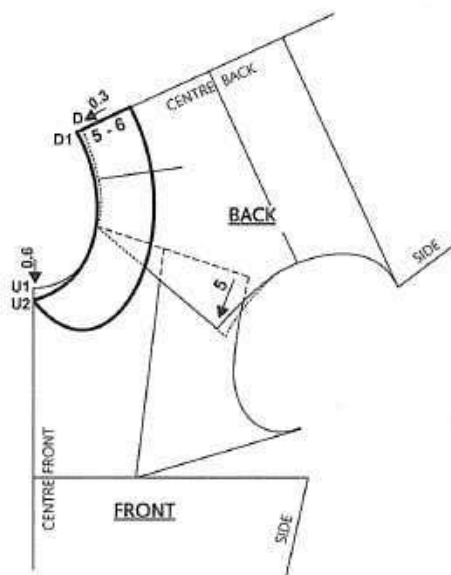
COLLAR WITH REVERS

- Close the bust dart and eliminate the back neck dart.
- Join the bodice front and back at the shoulder, overlapping the back by 10 cm.
- Trace off the collar as follows: shift D-D1 from the centre back 0.3 cm and lower U1-U2 on the centre front by 0.6 cm.
- Draw the external outline based on the height and shape desired.



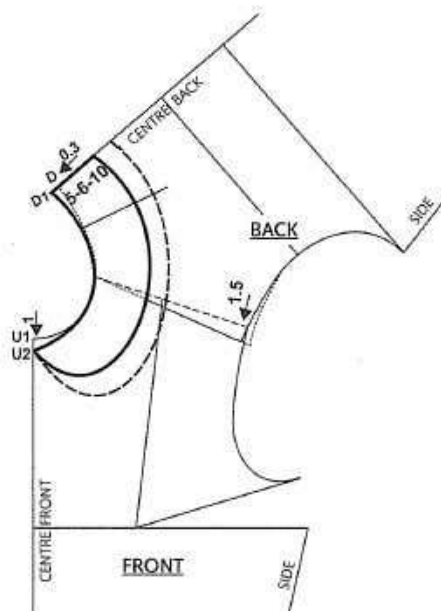
COLLAR WITH REVERS

- Close the bust dart and eliminate the back neck dart.
- Join the bodice front and back at the shoulder, overlapping the back by 5 cm.
- Trace off the collar as follows: shift D-D1 from the centre back 0.3 cm and lower U1-U2 on the centre front by 0.6 cm.
- Draw the external outline based on the height and shape desired.



FLAT COLLAR WITH SMALL REVERS

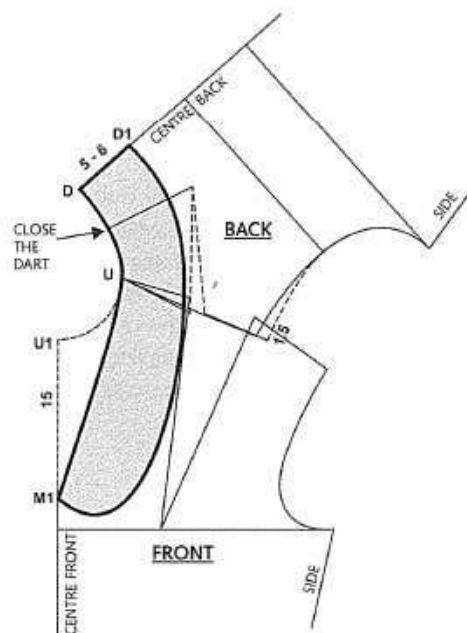
- Close the bust dart and eliminate the back neck dart.
- Join the bodice front and back at the shoulder, overlapping the back by 1.5 cm.
- Trace off the collar as follows: shift D-D1 from the centre back 0.3 cm and lower U1-U2 on the centre front by 1 cm.
- Draw the external outline based on the height and shape desired.



COLLARS FOR PLUNGING NECKLINES

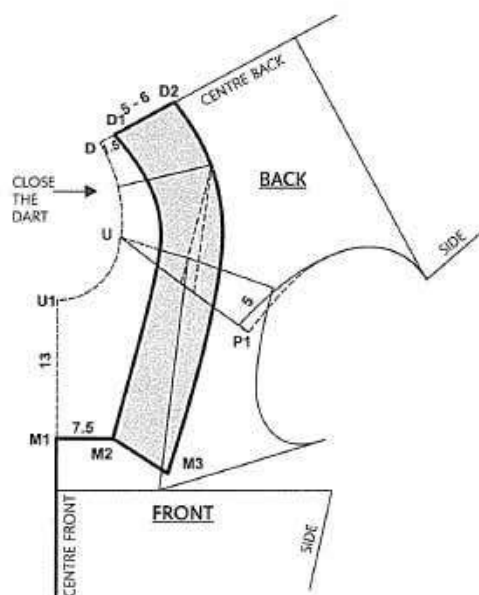
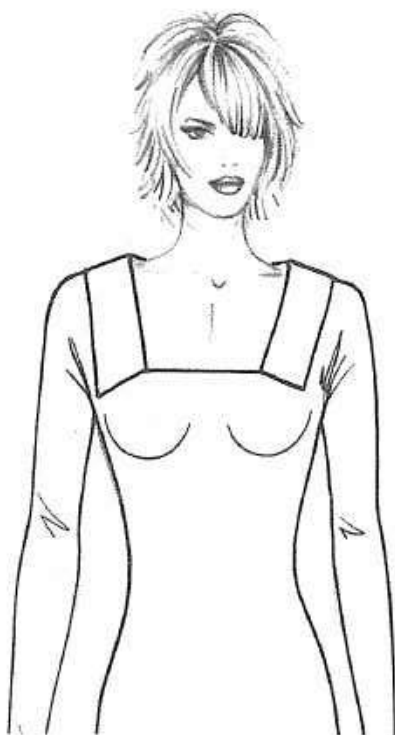
COLLAR FOR V-NECK

- Overlap back on front by 1.5-2 cm.
- $U1-M1 = 13-15$ cm.
- Join U-M1.
- $D-D1 = 5-6$ cm.
- Join $D1-M1$.

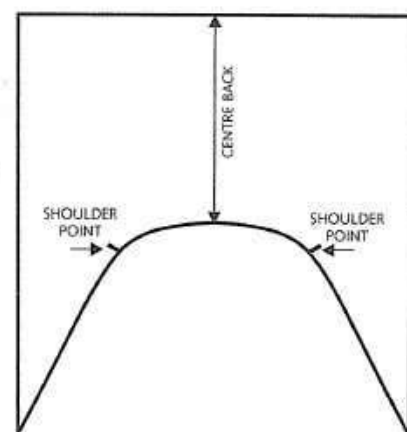
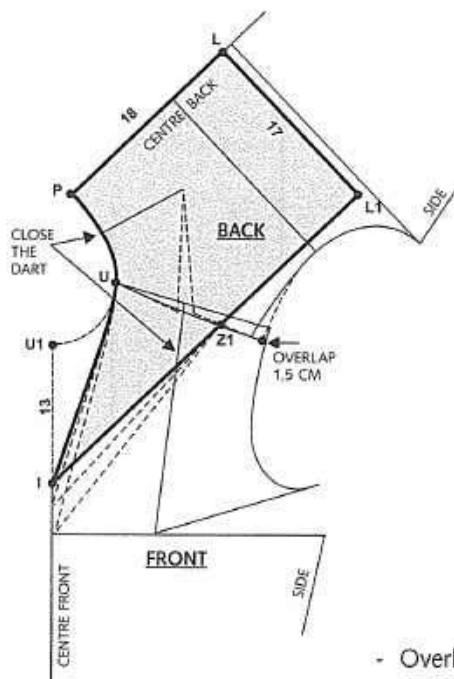
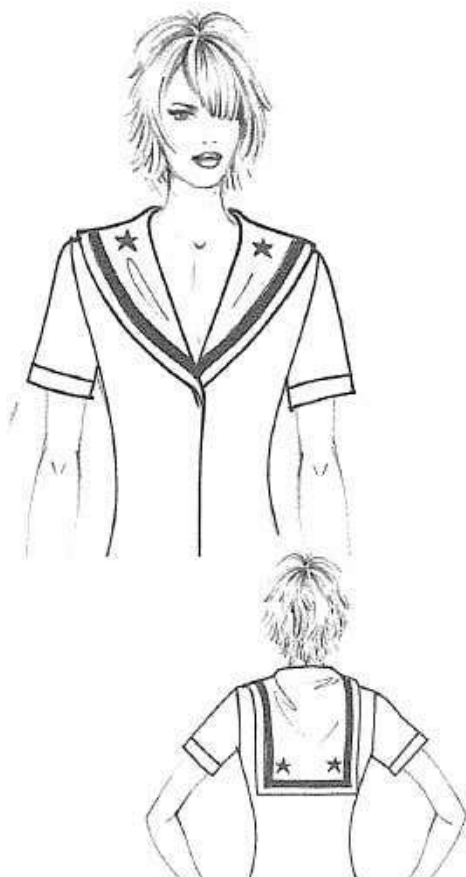


SQUARE COLLAR

- Overlap back P1 on the front by 4-5 cm.
- $U1-M1 = 13-15$ cm.
- $M1-M2 = 7.5$ cm.
- $M2-M3 = 5-6$ cm.
- $D-D1 = 1.5$ cm.
- $D1-D2 = 5-6$ cm.
- Join $D1-M2$.
- Join $D2-M3$.



SQUARE MIDDY'S COLLAR



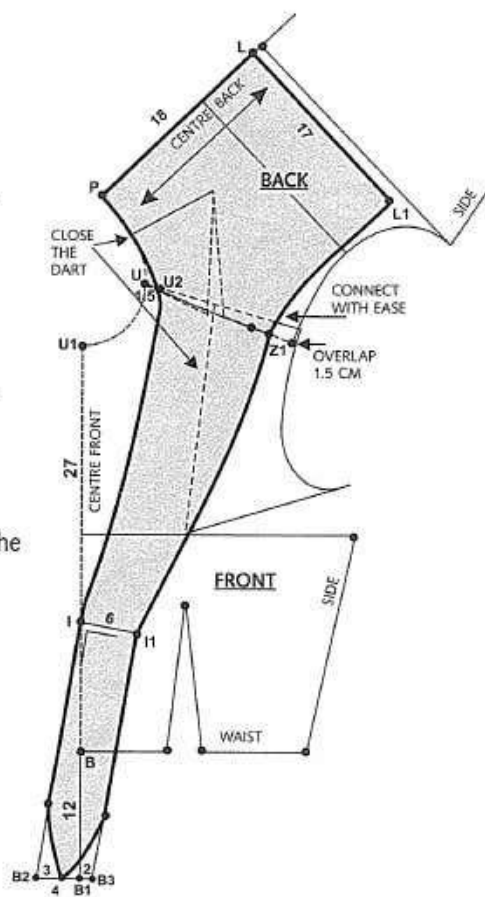
- Overlap the rear basic bodice block on the front by 1.5 cm with the darts closed.
- $U-I = 13$ cm.
- $P-L = 18$ cm.
- $L-L1 = 17$ cm.
- Right angle $L-L1-Z1$.
- $Z1-I$ at the desired inclination.

SQUARE MIDDY'S COLLAR WITH KNOT

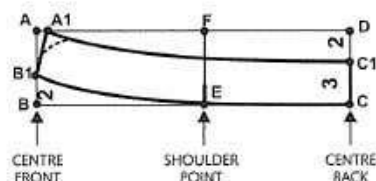
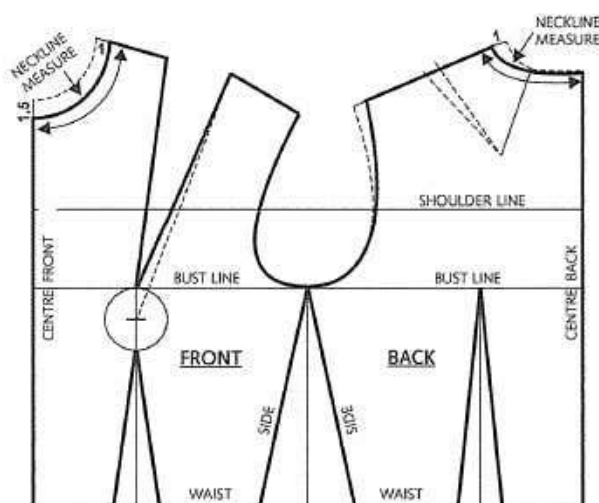


- Overlap the rear basic bodice block on the front by 1.5 cm with the darts closed.
- $U-I = 27$ cm.
- $P-L = 18$ cm.
- $L-L1 = 17$ cm.
- Right angle $L-L1-Z1$.
- $U-U2 = 1.5$ cm.
- $U2-I = 27$ cm or at the desired inclination.
- $B-B1 = 12$ cm.
- $B1-B2 = 4$ cm.
- $B1-B3 = 2$ cm.
- $I-I1 = 6$ cm or as desired.

Connect the points and carefully join to the bodice as shown in the figure.

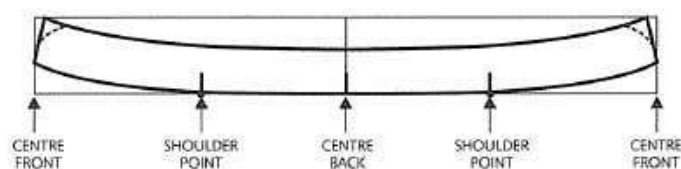


MANDARIN COLLAR

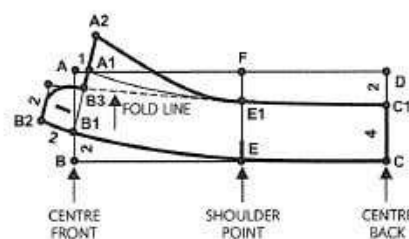


- Measure the bodice neckline.
- Draw a rectangle A-B-C-D with:
- A-B equal to collar height + 2 cm.
- B-C equal to $\frac{1}{2}$ neckline front and back + 1 cm.
- B-B1 = 2 cm.
- D-C1 = 2 cm.
- C-E = measure rear neckline (e.g.: 8 cm).
- C-C1 = collar height.
- A-A1 = 1 cm.

Connect the points shaping as shown in the figure.

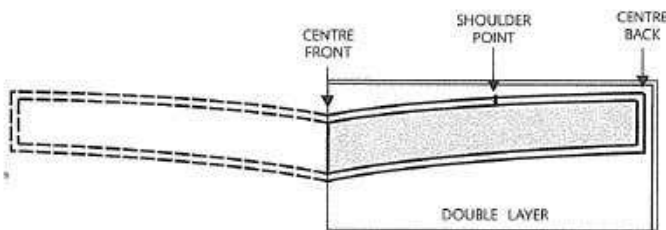
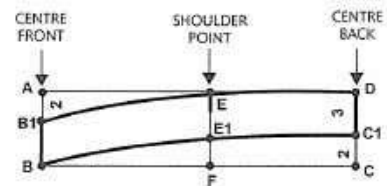
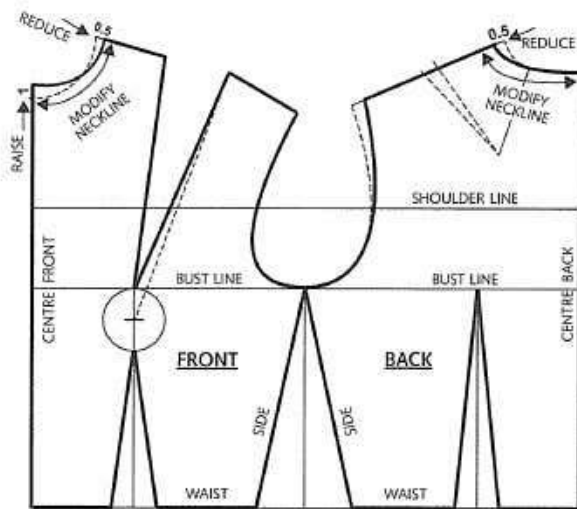


VERSION WITH POINTS AND BUTTON



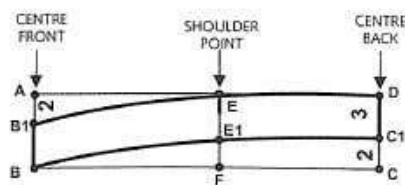
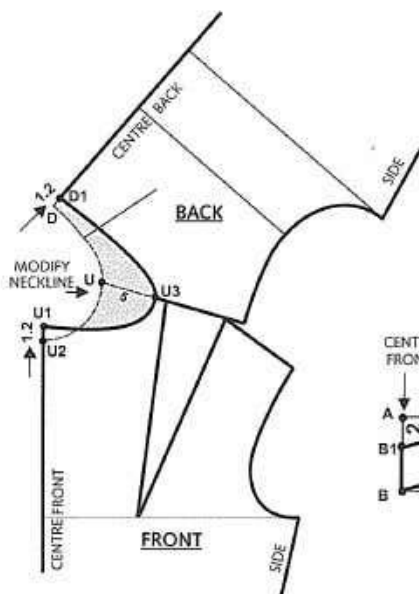
- Make the basic mandarin collar block with desired measures.
- B1-B2 = 2 cm.
- B1-B3 = 2 cm.
- A-A1 = 1 cm.
- B3-A2 = fold height (e.g.: 3.5 cm).
- Join E1-A2-B1-B2-B3.

RING COLLAR



- Draw a rectangle A-B-C-D.
- A-B = collar height + 2 cm.
- B-C = $\frac{1}{2}$ total collar circumference, like bodice.
- C-F = $\frac{1}{2}$ rear neckline as bodice.
- C-C1 = 2 cm.
- A-B1 = 2 cm.
- Connect as shown in the figure.

VARIATION ON THE RING COLLAR

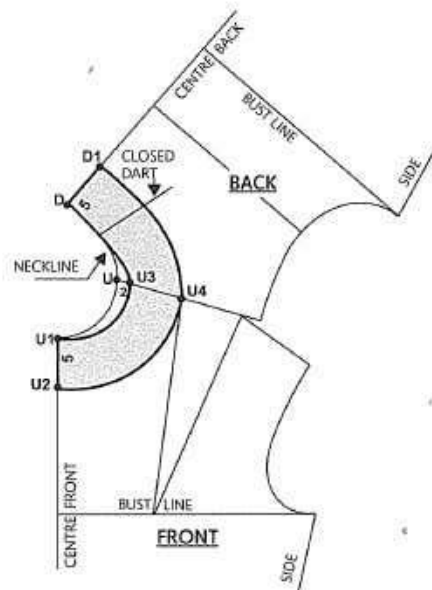
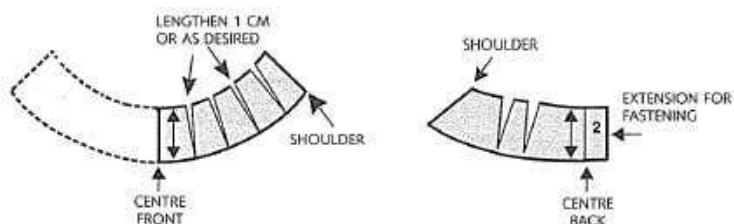


- Modify the neckline of the bodice block as shown in the figure.
- A-D = $\frac{1}{2}$ total measure of the new neckline.
- B-B1 = collar height.
- B-E1 like U1-U3 on front.
- C1-E1 like D1-U3 on back.

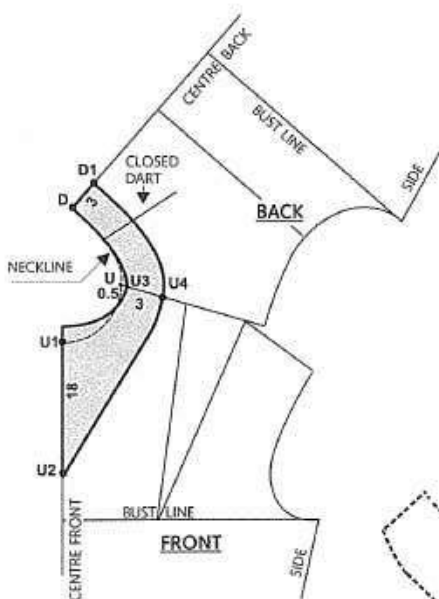
CRATER COLLAR



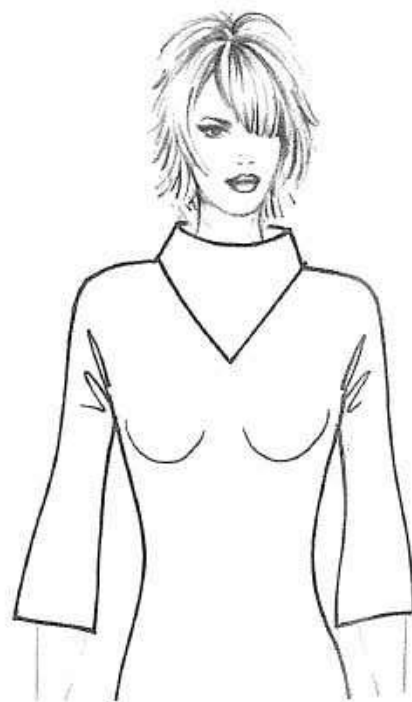
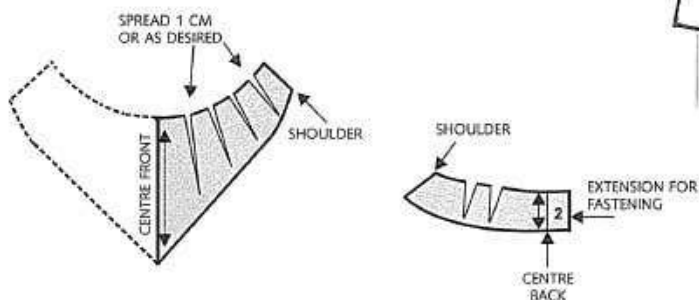
- Draw the bodice block and join the front and back at the shoulder.
- $U-U3 = 2$ cm.
- $U1-U2 = 5$ cm (or as desired).
- $D-D1 = 5$ cm.
- $U3-U4 = 5$ cm.
- Join with a curved line as shown in the figure.
- Separate the front and the back, make 4 slashes in the front neckline and 2 slashes in back, and spread them out.



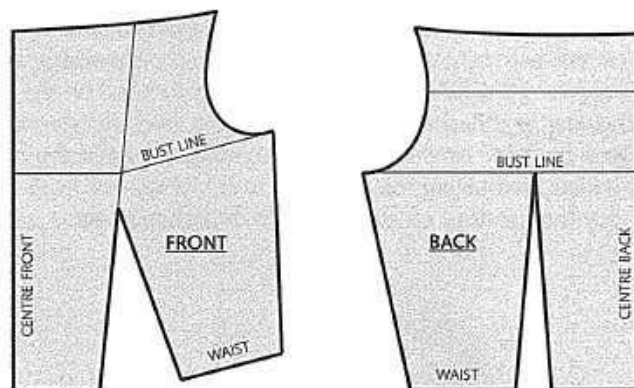
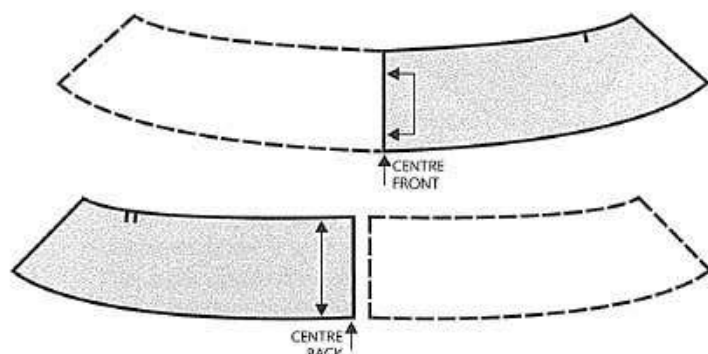
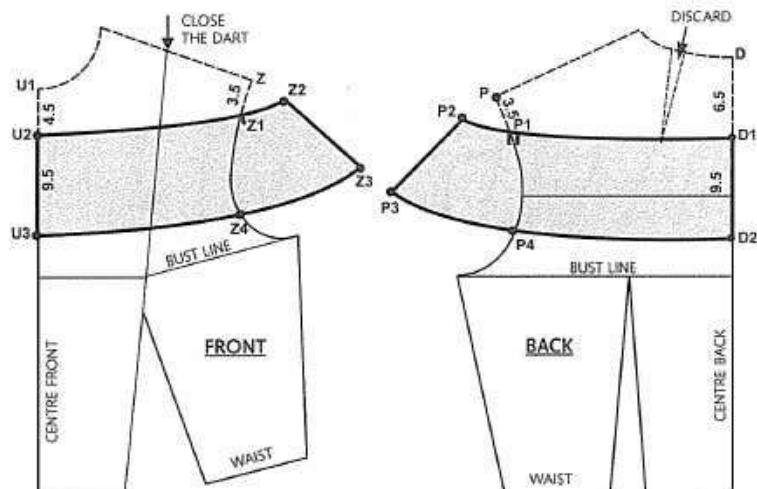
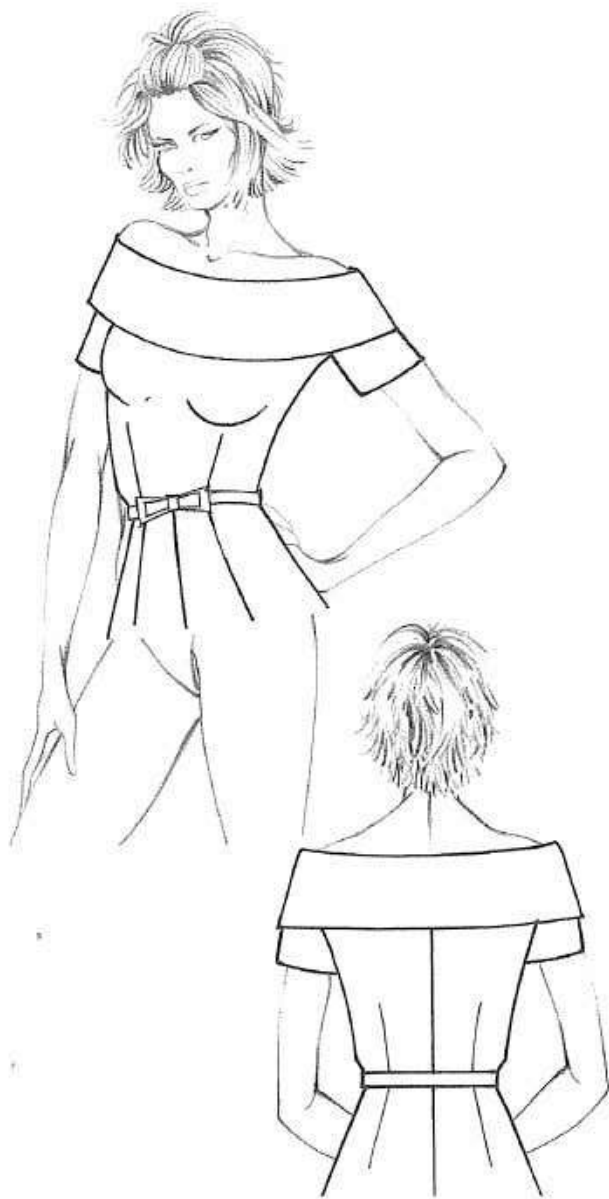
VARIATION ON THE CRATER COLLAR



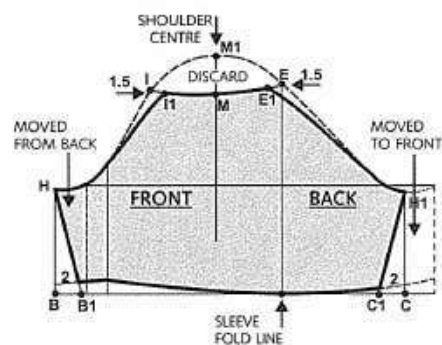
- Draw the collar as above with $U1-U3 = 0.5$ cm and $D-D1 = 3$ cm.
- Lengthen the front by 18 cm and, after connecting the points, separate the front from the back and spread as desired.



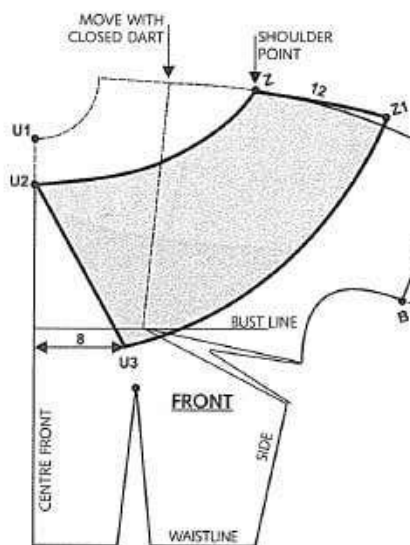
BANDEAU NECK INSET SLEEVES



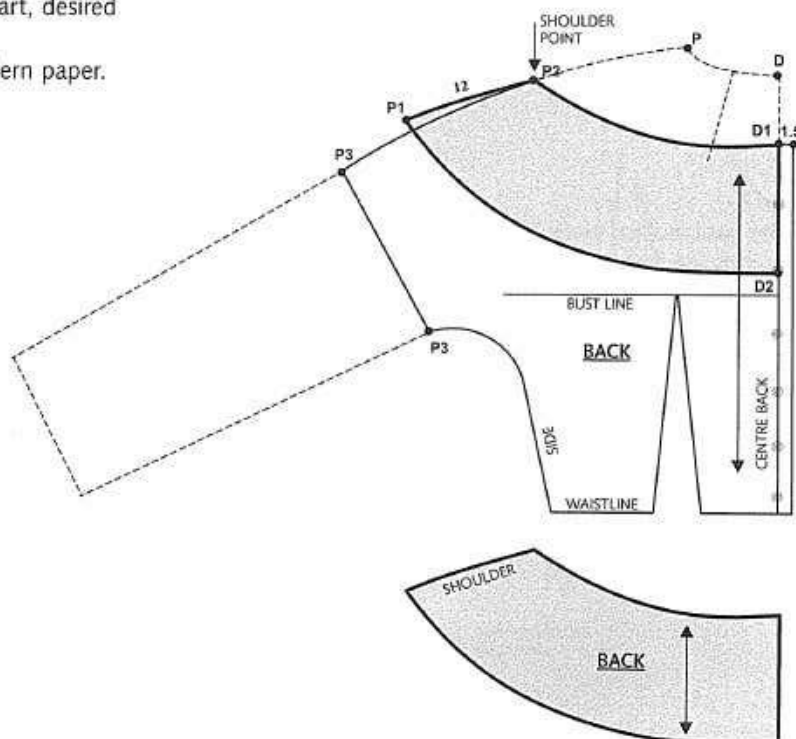
- Draw the basic bodice block and close the bust dart moving it to the waist or some other position depending on the style.
- Draw the bandeau with the height and neckline desired, as shown in the figure.
- Trace off the bandeau front and back with another piece of pattern paper.
- Alter the sleeve crown in accordance with the lowering of the bodice top.



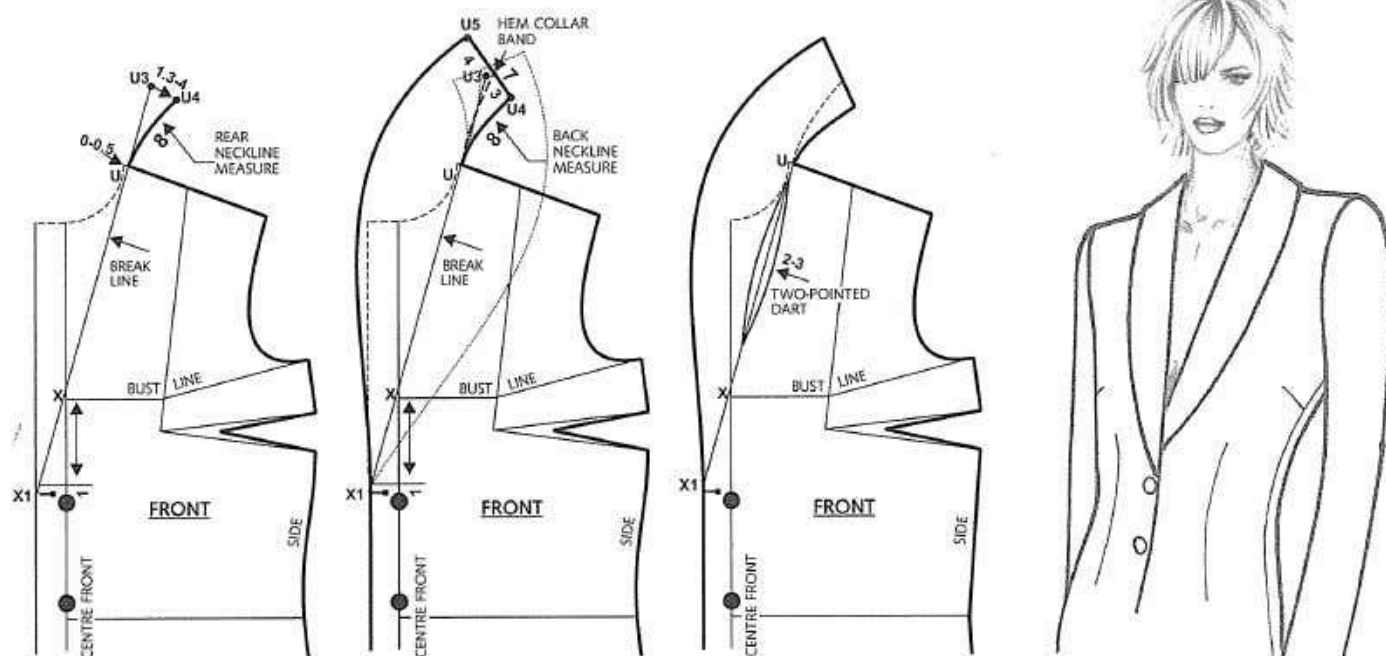
BANDEAU NECK KIMONO SLEEVES



- Draw the basic kimono block with desired length and fullness, with bust dart open or closed on the shoulder.
- Draw the front bandeau, with the bust dart closed on the shoulder, and desired neckline and height.
- Draw the back bandeau with closed neck dart, desired neckline, and height like front.
- Copy the bandeau on another piece of pattern paper.



SHAWL COLLAR



INTRODUCTION

Shawl collars are made as part of the front bodice, and there is a seam in the centre back, except in particular cases requiring an invisible seam. In such cases, a double layer placket is made in the centre back, and there is considerable waste of fabric. This type of collar offers great variety in terms of motifs and shapes, as all the motifs are simply drawn on the top collar part of the pattern.

EDGED LAPEL SHAWL COLLAR

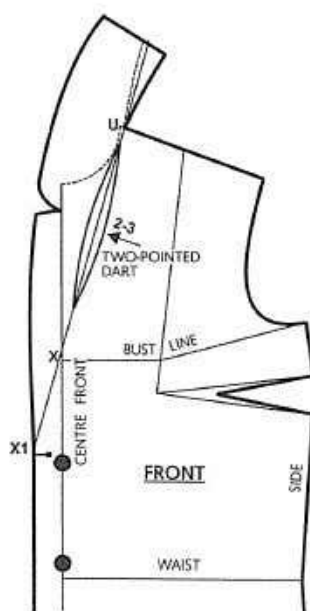
- Draw the bodice block with the measurements and ease suited to the design, and bust dart moved to the side seam or elsewhere, or eliminated, depending on the look.
- Extend the centre front for the fastenings.
- Mark point X in the centre front for the position of the top button, which also marks the bottom end of the lapel. This point must be positioned about 1 cm from the neckline of the finished pattern, where the lapel ends.

- Draw the break line X-U1 and extend it as far as U3, measuring the same as the back neckline (e.g.: 8 cm).
- From U3 move out 1.3-4 cm depending on the desired height of the stand, and draw point U4.
- Draw a curved line U-U4 same length as U-U3, the back neckline measure.
- Draw the line U4-U5 squared with line U-U4, with measure of the desired collar height (7-10 cm).
- Draw the outline U5-X1, with the desired shape and motifs, returning to the centre front extension for the buttons.

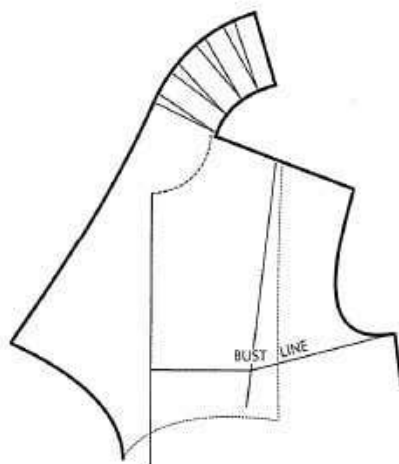
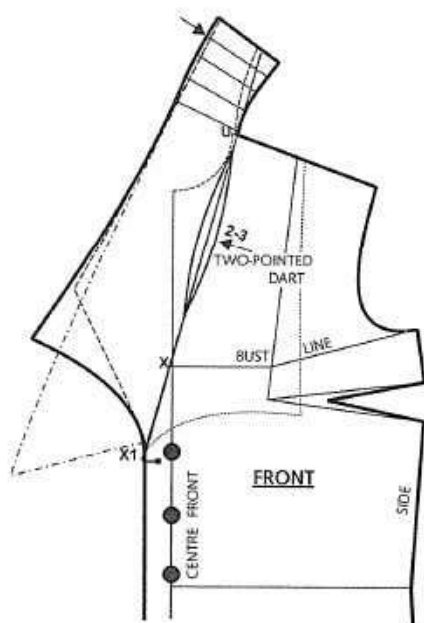
TWO-POINTED DART IN THE LAPEL

To get a sharper fold, greater curvature and improved adherence of the lapel, you can make a pointed dart on the break line, with a total depth of 2-3 cm.

VARIATION ON THE SHAWL COLLAR



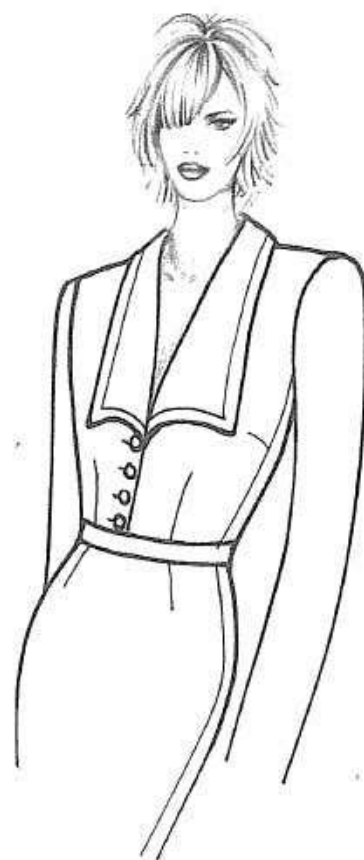
HALTER TOP WITH LAPELS



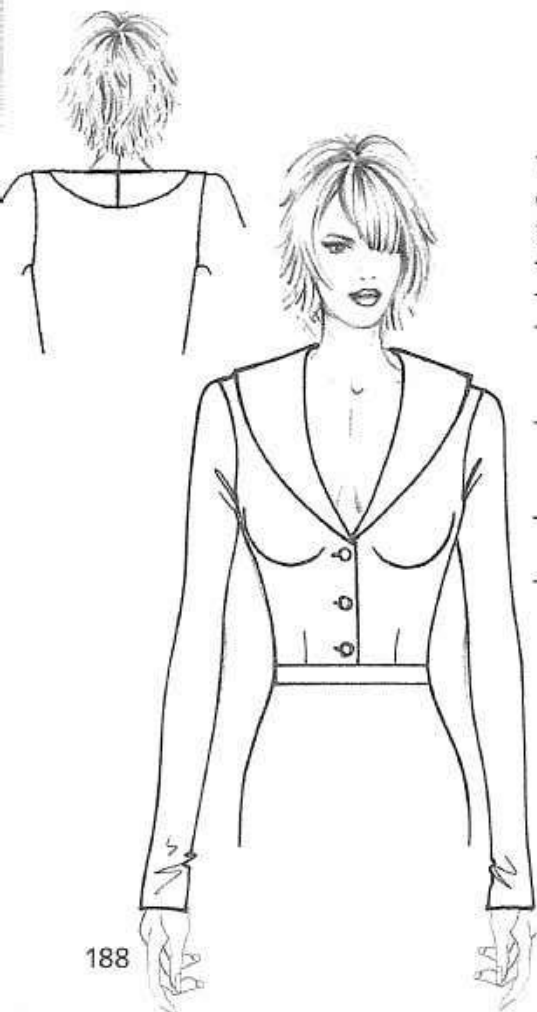
This style of collar is done following the procedure for the normal shawl collar, giving the lapel the shape desired.

It is possible to make a high or low collar stand.

In the latter case, make cuts in the back of the collar from the outer edge to the collar seam, and you widen them as desired.

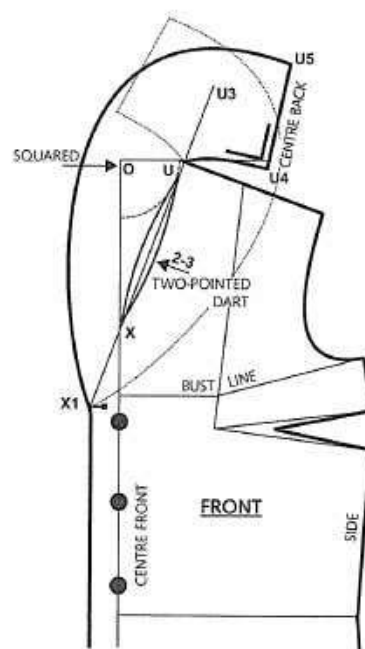


FLAT SHAWL COLLAR



The flat shawl collar is practically without a collar stand, but even a small one ensures the absence of creases in the outer edge.

- Draw the desired basic bodice block.
- Draw the break line X-U3.
- Draw a right angle U1-O-U on the neckline and continue to U4 for the back neckline length.
- Draw the back neckline U-U4, keeping below the guideline by 1 cm, or remain above it so the collar will not be so flat.
- Draw the centre back of the collar U4-U5 squared with U-U4.
- Draw the external outline of the collar.

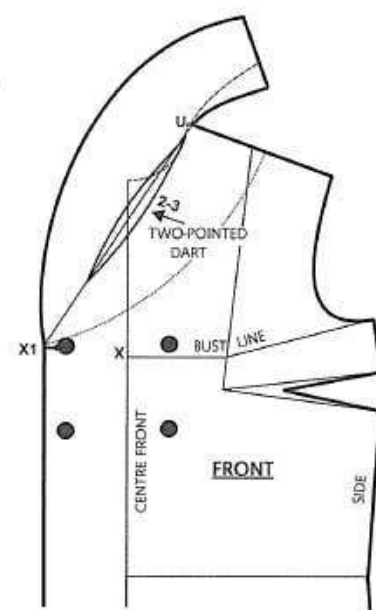


DOUBLE-BREASTED SHAWL COLLAR

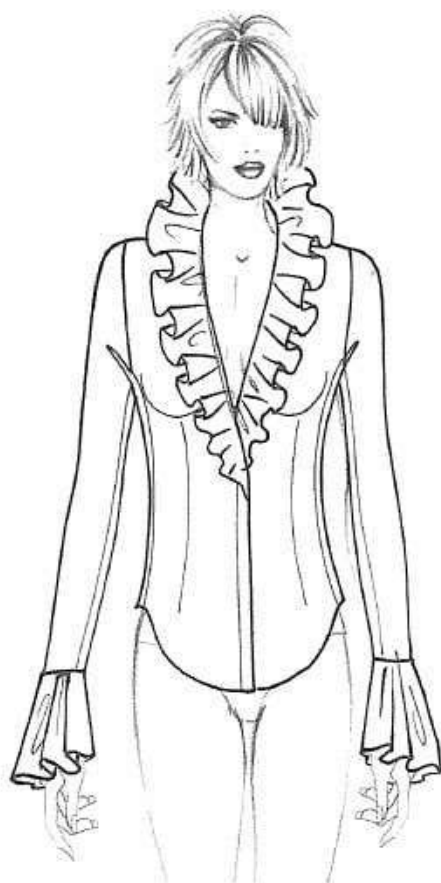


The shawl collar on a double-breasted garment is made the same way as the shawl collar with a low stand, since the extension of the centre front is widened to accommodate the double breast.

The back neckline has to be wide and curved, allowing a lower stand and creating a correct fit in the back.

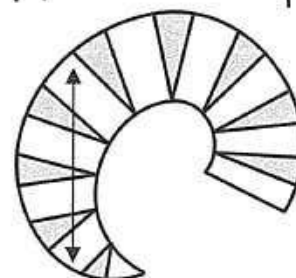
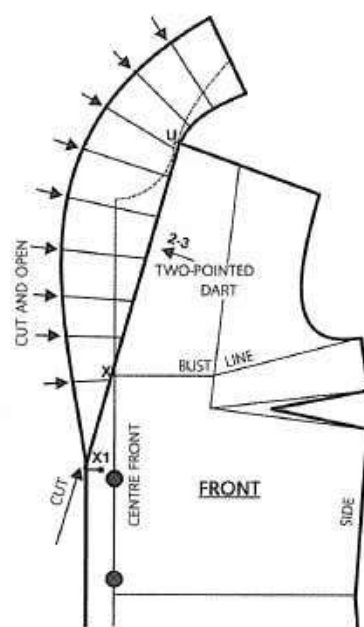


JABOT SHAWL COLLAR

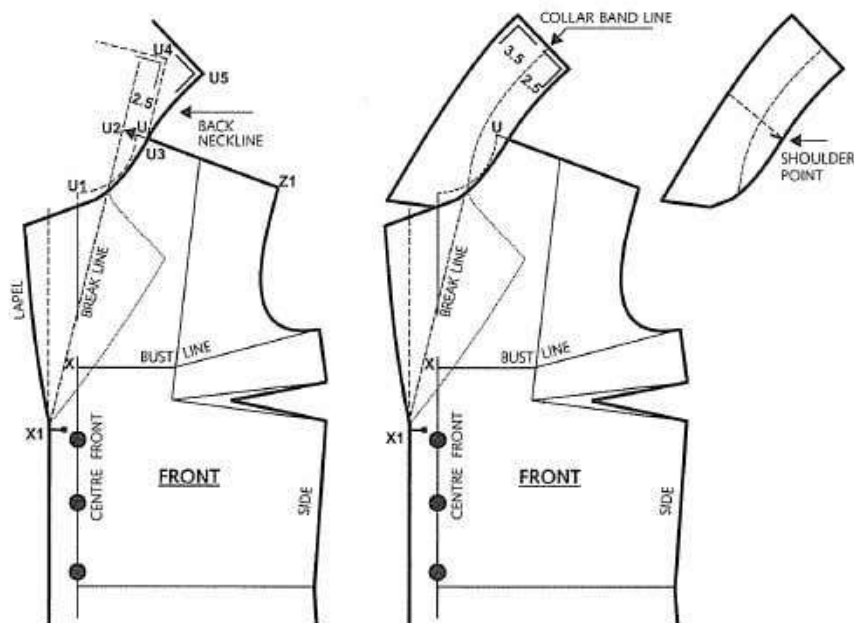


The jabot collar or "ruche" is made by constructing a shawl collar with a stand that can be higher or lower, depending on the style.

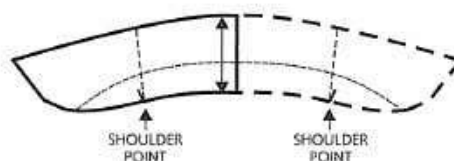
- After making the shawl collar with the desired neckline, trace off a series of lines perpendicular to the break line.
- Slash along these lines and open them as needed, depending on the desired ruffling (2-3 cm), forming an elliptical spiral, as shown in the figure.



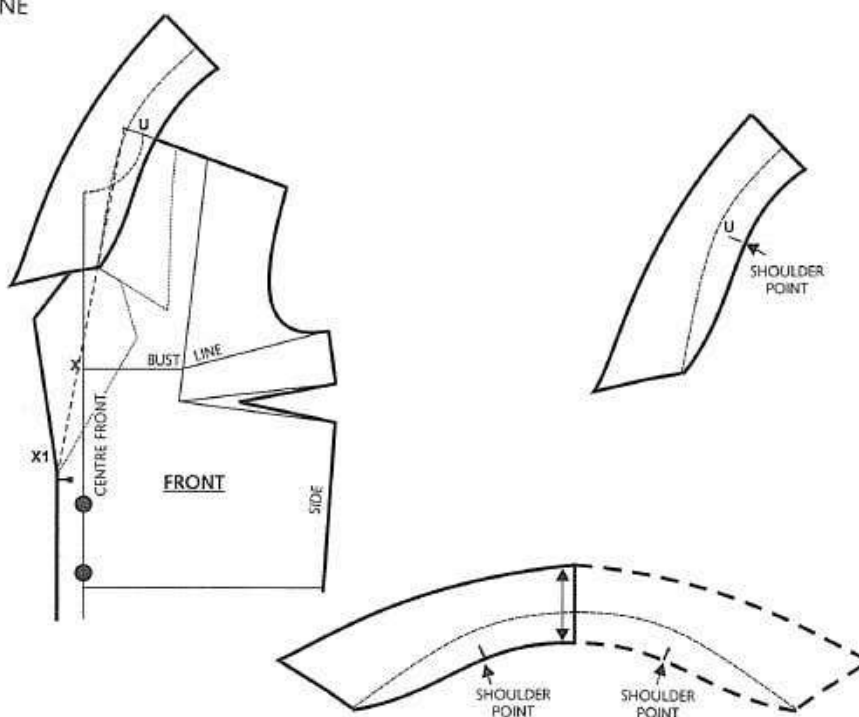
SPORTS COLLAR



- Draw the basic shirt block.
- Make the centre front extension for the placket and draw the revers as desired.
- Create the break line X1-U2 depending on the desired neckline and the position of the first button, 2-2.5 cm away from U and continuing for the length of the back neckline (e.g.: 8 cm).
- Draw the back neckline U3-U4 parallel to the break line and 0.5-1 cm away from U.
- Draw U5 at a distance of 1.3-2.5 cm from U4 and join the neckline with the outer edge of the collar, giving it the desired shape.



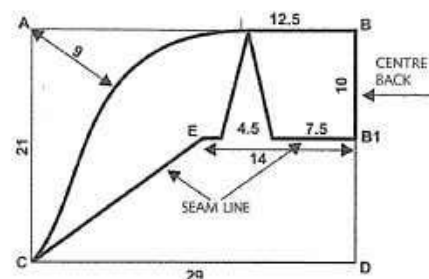
SPORTS COLLAR WITH DEEPER NECKLINE



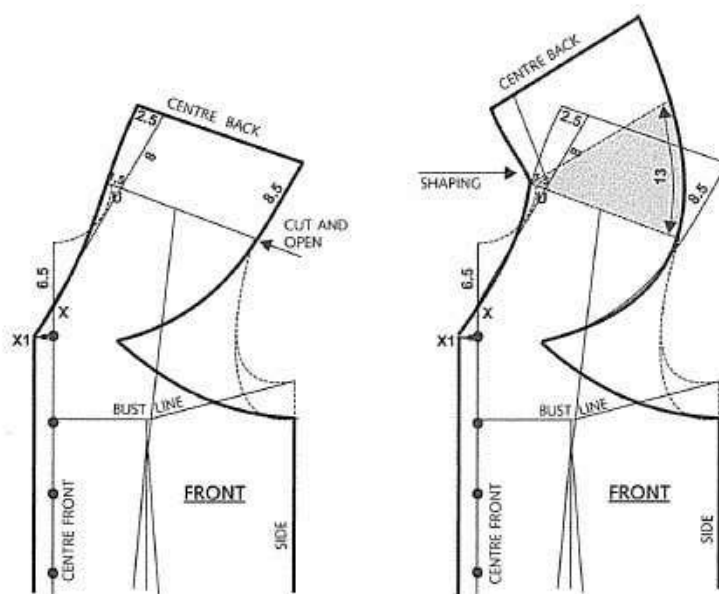
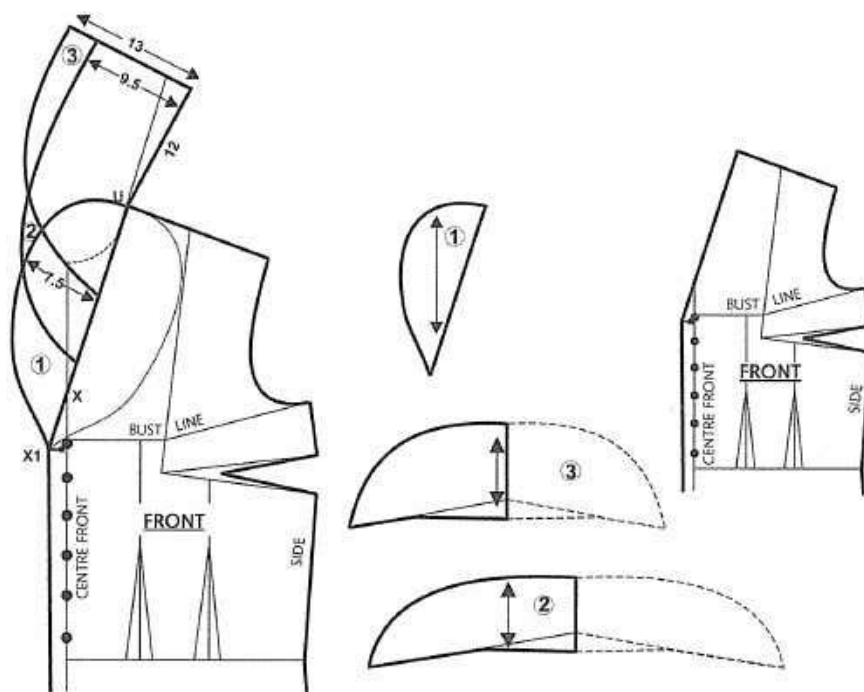
SHELL COLLAR



- Draw a rectangle A-B-C-D with:
- A-B = 29 cm and A-C = 21 cm.
- B-B₁ = 10 cm.
- Draw the external neckline B-C as shown in the figure.
- Draw the 14-cm horizontal line B₁-E, and join E-C.
- At 7.5 cm from B₁, draw a 4.5-cm wide dart on the B₁-E line.

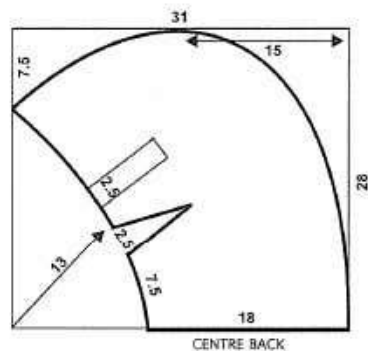


A black and white fashion sketch of a woman from the waist up. She has short, layered hair with bangs and is looking slightly to the right. She is wearing a high-collared dress with a buttoned front. The collar is wide and ruffled. The sleeves are short and puffed at the shoulders. The dress is cinched at the waist with a wide belt. The front of the dress has a vertical line of buttons. The sketch is done in a simple, clean line style.

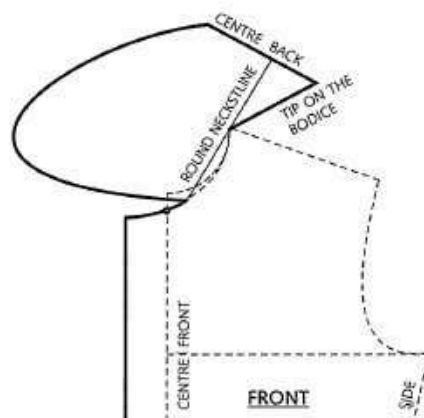
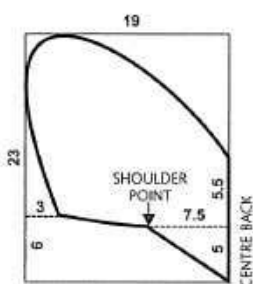


FANCY COLLARS

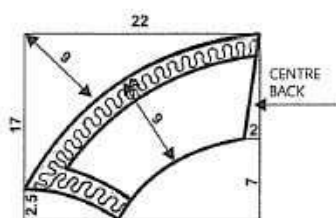
TURN-OVER COLLARS



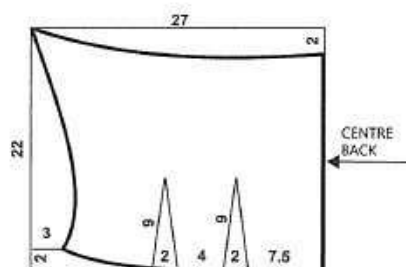
COLLAR WITH POINTED TIPS IN BACK AND ROUND IN FRONT



MEDICI COLLAR



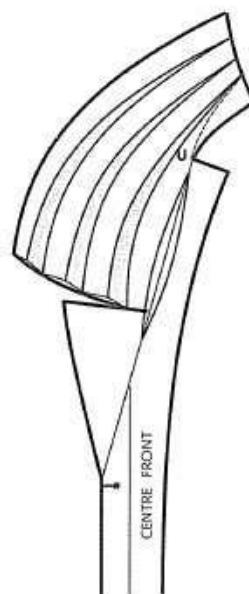
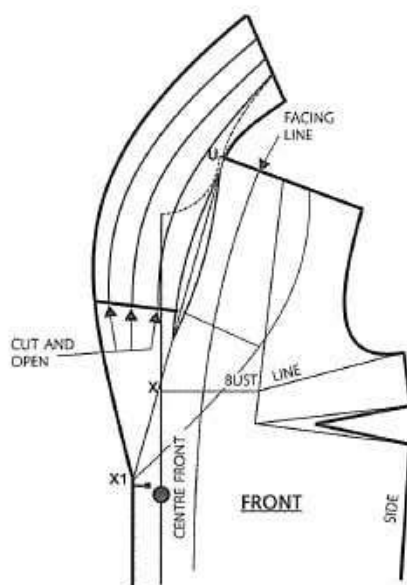
DOUBLE COLLAR



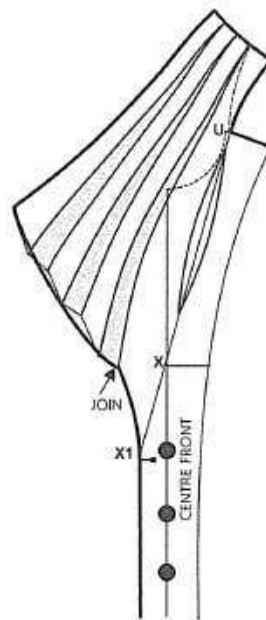
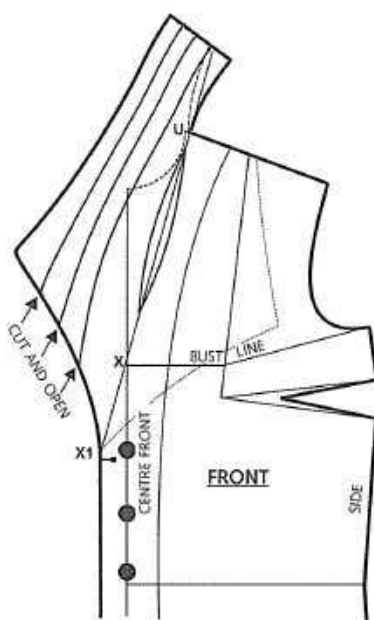
NOTCHED AND RUFFLED SHAWL COLLAR



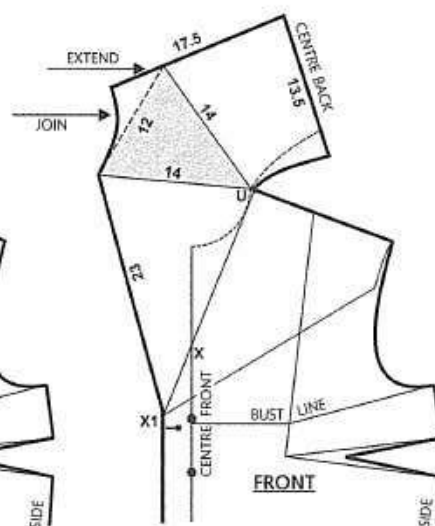
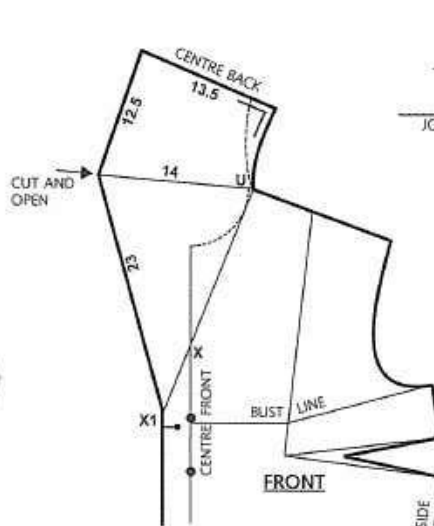
Note: We recommend making this only with a larger top-collar over a normal under-collar, so it will keep its shape.



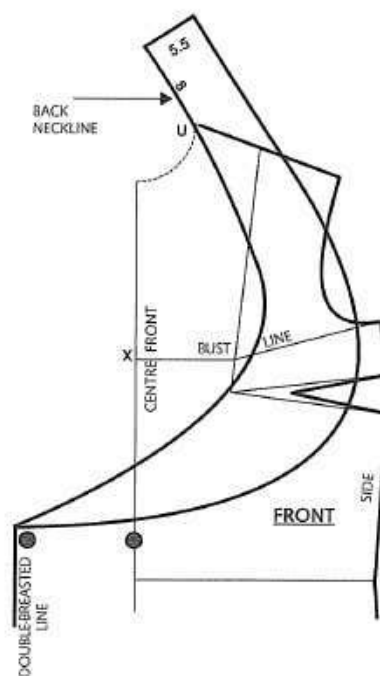
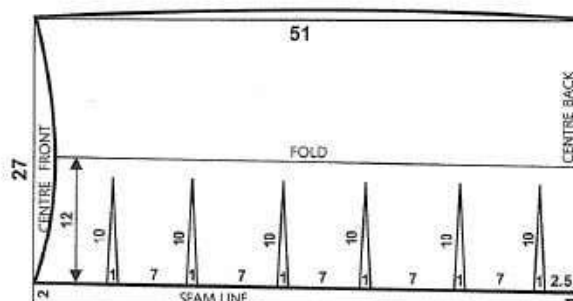
GATHERED HALTER TOP



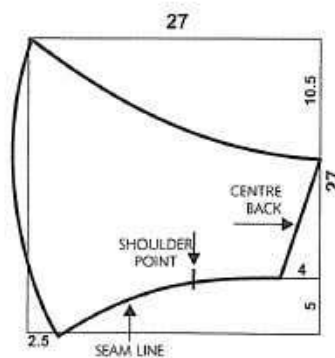
RAISED CAPE COLLAR



COROLLA COLLAR



A black and white line drawing of a woman from the waist up. She is wearing a double-breasted jacket with a wide, flat collar. The jacket has four circular buttons arranged in two rows. The sleeves are long and flared, resembling bell sleeves. She is also wearing a simple necklace with a small pendant. The drawing is minimalist, using only outlines.



FACINGS

BASICS

Facings are reinforcements that serve to support and finish garment edges such as necklines, button plackets, or sleeveless armholes.

Facings are usually cut on the same straight grain as the pattern piece they will be coupled with, and they are sewn to the wrong side of the garment.

There are essentially four kinds of facings: *bias facings*; *shaped facings*; *combination facings*; and *extended facings*.

Bias facings.

This kind of facing is made simply with a strip of fabric cut perfectly on the bias and used for parts that are not too rounded.

Shaped facings

Shaped facings are mostly used for necklines, in button plackets on the centre front or centre back, and in sleeveless armholes.

The pattern is made copying the same pattern piece of the part to be reinforced or finished.

Combination facings

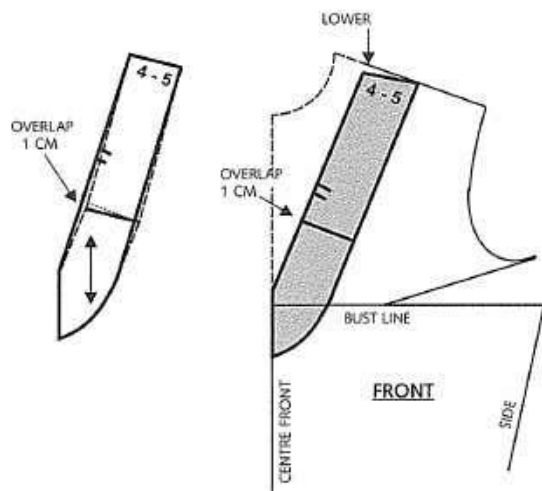
These are facings made by eliminating darts and seams. In fact, two separate facings can be joined in a single, continuous facing. When, instead, the facing crosses over one or more darts, they must be eliminated by closing them before tracing off the pattern.

To draw the combination facing that follows the shape of the sleeveless armhole and the neckline, the front and the back have to be matched at the shoulder, and the edges of both armholes and the neckline followed, marking where they will be joined.

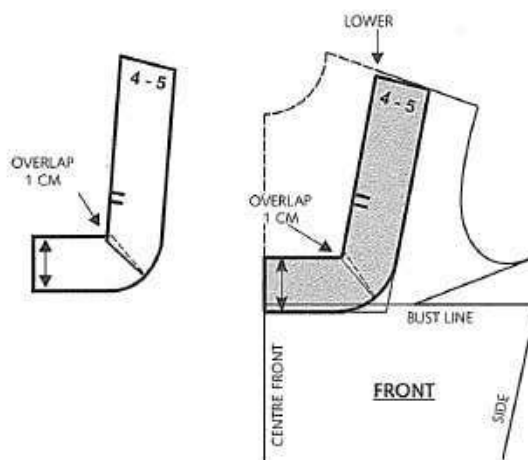
Extended facings

Extended facings are cut in a single piece, as if they were an extension of the garment, then they are folded back along the edge they finish.

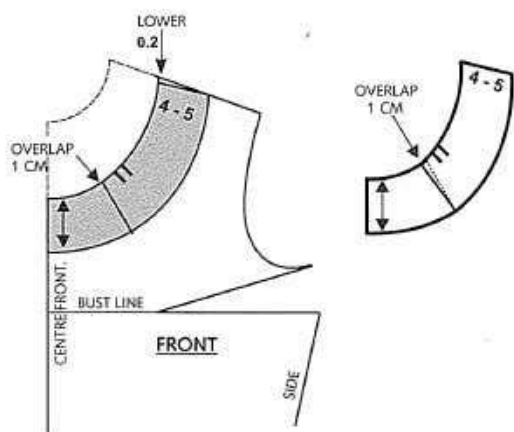
This kind of facing can only be used when the edge is straight, and it requires more fabric in the cutting layout.



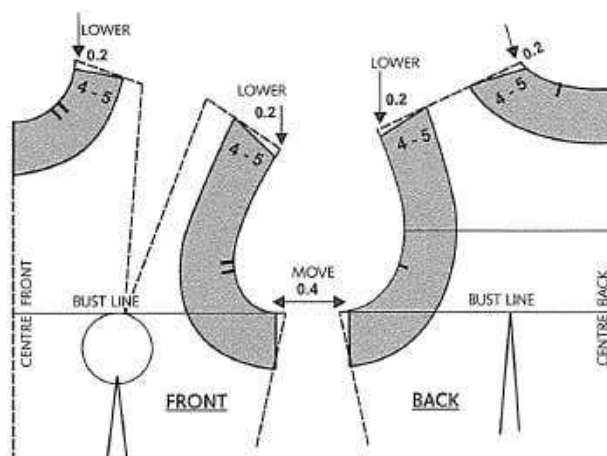
"V-NECK" FACING



SQUARE NECKLINE FACING



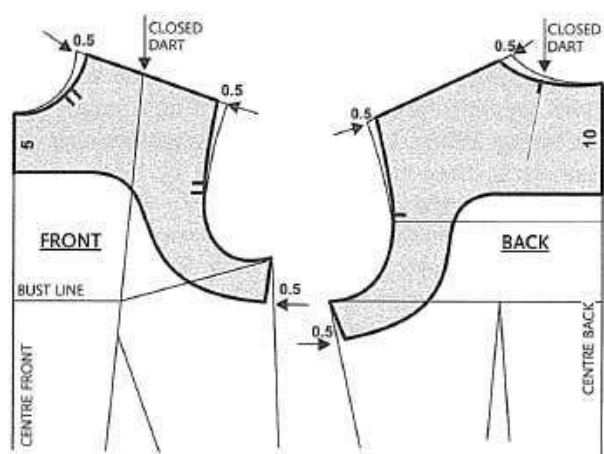
ROUND NECKLINE FACING



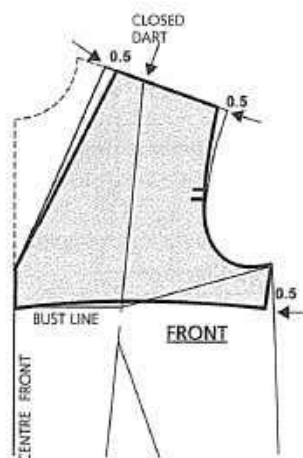
ROUND AND SLEEVELESS ARMSYCE FACING

FACINGS

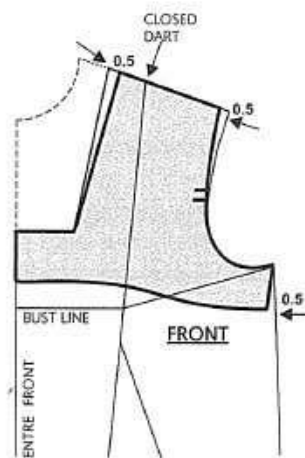
COMBINATION SHAPED FACINGS



ROUND NECK FACING

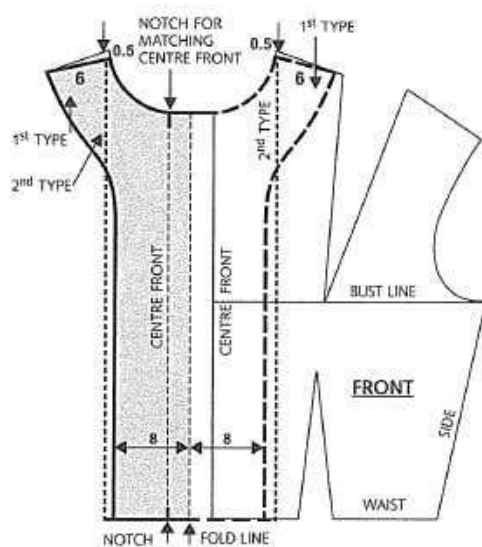


"V-NECK"

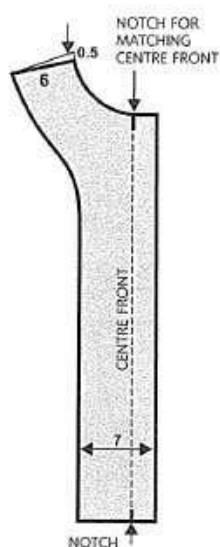


SQUARE NECKLINE

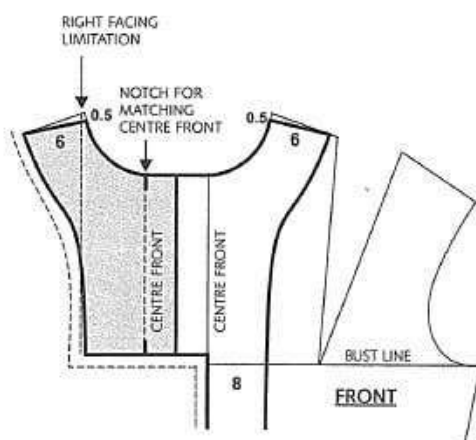
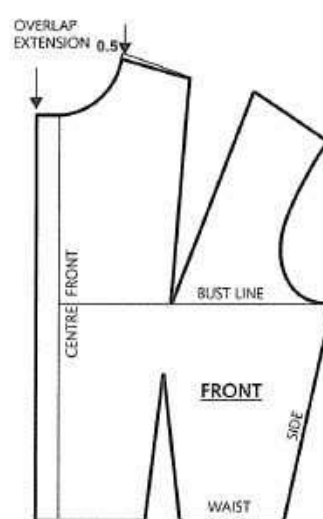
WHOLE FACINGS



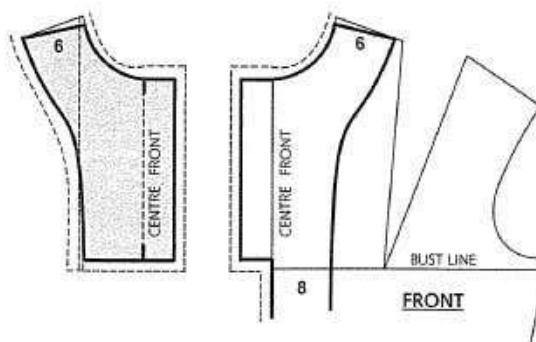
WHOLE FACING



SEPARATE FACING



WHOLE FACING ONLY ABOVE



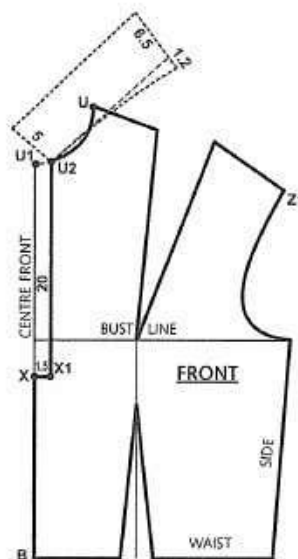
SEPARATE FACING ONLY ABOVE

"POLO" OPENINGS

WITH FACING

"Polo" openings are made on the fronts of shirts or tops, and they vary in length and width; their ends can be pointed or square, and they can culminate in the neckline without a collar

or join up with various types of collars and be finished with a whole or separate facing.

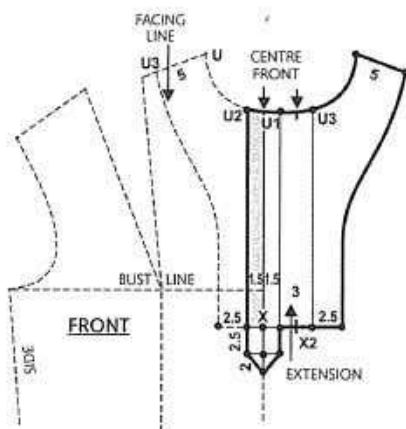
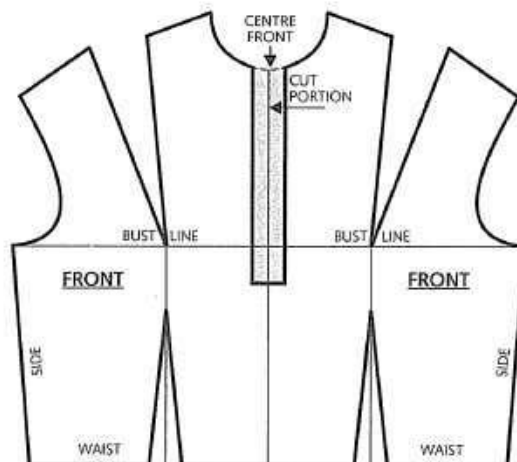


- Draw the bodice block.
- U1-X opening length (15-20 cm).
- $X-X1 = 1.5-2.5$ cm.
- Draw X1-U2.

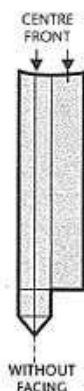
"Polo" openings can be made with a shaped facing as shown in the figure or without facing.

- Draw the extension of the centre front X2-U3 equal to the cut made on the basic block (3 cm).
- Copy the outline of the facing, if called for, and add it to the extension of the centre front.

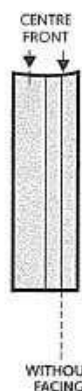
The righthand side of the placket may have an external extension at the bottom, pointed or square, while the lefthand one, which is underneath, does not have an extension.



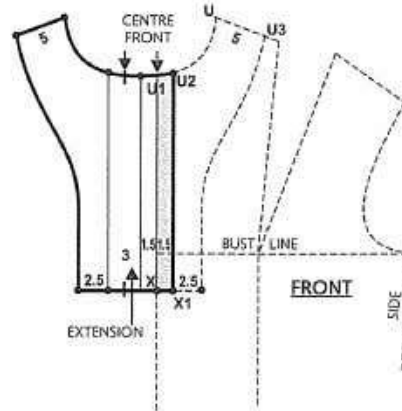
RIGHT OPENING



WITHOUT FACING

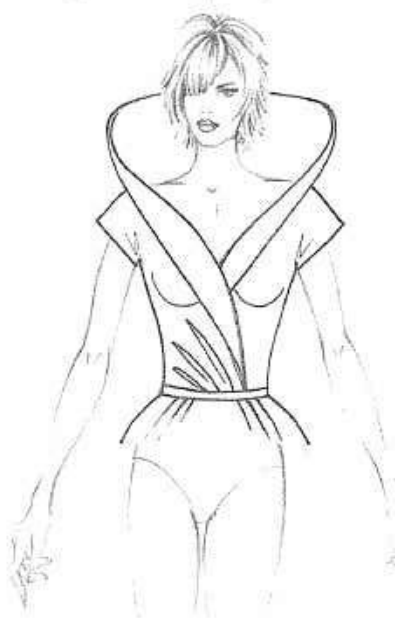
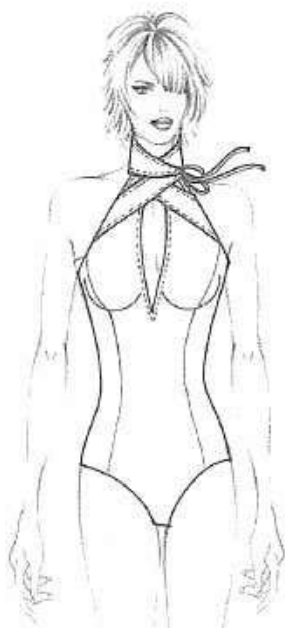
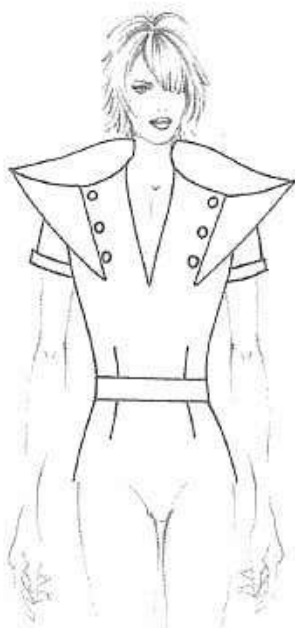
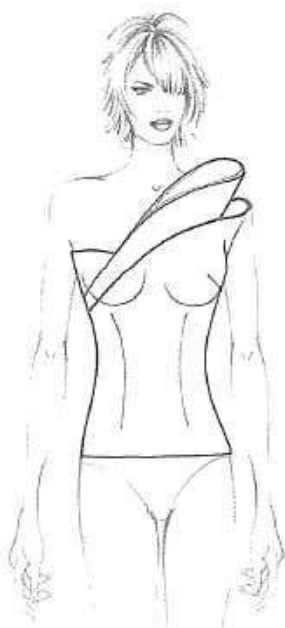
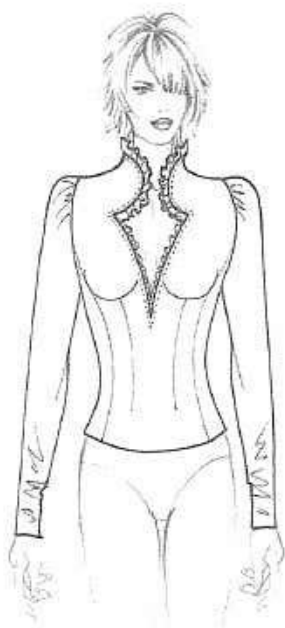


WITHOUT FACING



LEFT OPENING

FANCY COLLAR EXERCISES



ALTERATIONS OF THE BODICE BLOCK

THE FUNCTIONS AND MANIPULATION OF DARTS



Dart positions on the bodice.	200
Examples of the use of darts.	201
Dart control techniques.	202
A more graceful look for the pattern ...	203
Shifting the shoulder dart.	204
Shift the dart to the side seam.	205
Moving darts to the waist.	206
Shifting the dart to the centre front ...	207
Shifting the dart to the armhole.	207
Shifting the dart to the neckline.	208
Shaping the front without darts.	209
Moving the back darts.	210
Fancy asymmetrical darts.	211
Fancy dart exercises.	212

DART POSITIONS ON THE BODICE

INTRODUCTION

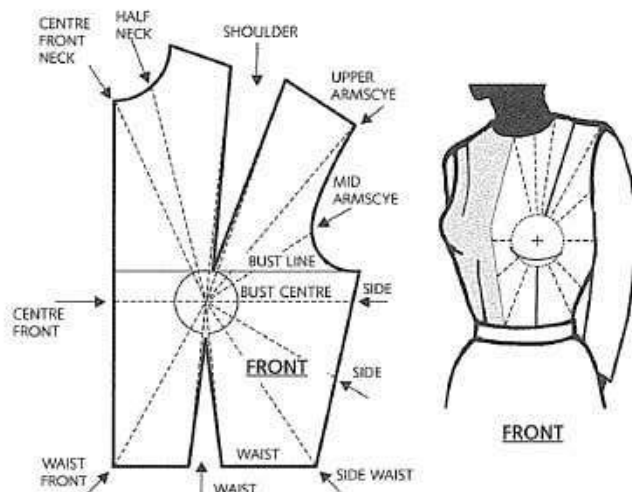
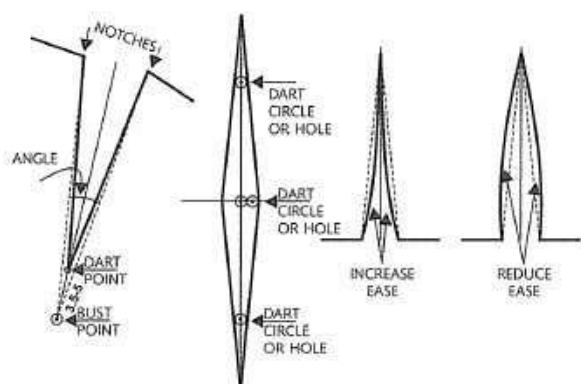
Darts are sewn triangular folds that serve to give shape to a close-fitting garment, following the figure's curves.

Their width is proportional to the curve: the larger the curve with respect to the rest of the figure, the greater the area to correct by means of darts.

- Analysis of the function played by darts, their position, and the technique of rotation, must be very thorough because the correct positioning and use of them is fundamental to the quick and smooth creation of patterns.

- Dart lines may be either straight or curved. The curved ones offer better shaping of the garment and can be curved inwards, in order to increase ease, or curved outwards to reduce ease, for a snugger fit.

- On the pattern, darts are marked by notches on the seam allowance and circles at the point. The circles are placed 2-3 cm from the top, at a distance sufficient for them to be contained in the stitching, and they serve as a reference point for assembly; these points are made industrially using special drills.



WAIST DARTS

Waist darts have their apex at the bust point, and can later be moved in a circle around that point, in correspondence with the bust divergence line and the base on the waistline.

Depending on the style, the waist dart can be moved to other positions along the waist, or it can be slanted or merged into gathers or seams.

This dart can only be moved to merge it into the seams, both in front and in back.

FRONT

The bodice front has two darts: the *bust dart* and the *waist dart*.

BUST DART

The bust dart can originate from anywhere along the pattern's edge, but it must always end at the bust point: from the shoulder, the side, the neckline, the centre front, the armscye, or from the waist.

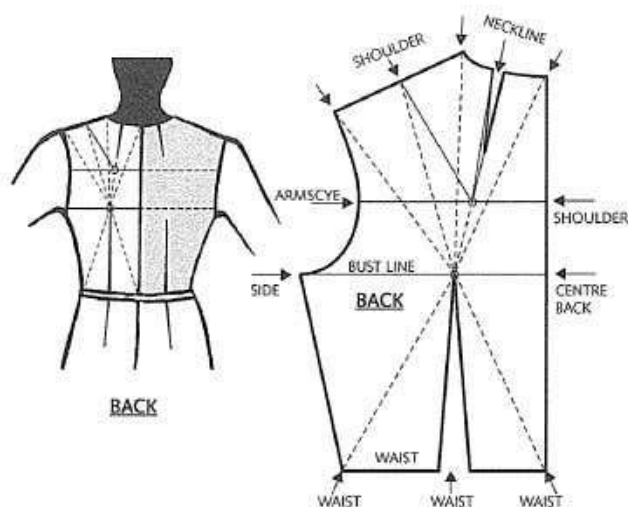
- Wherever they originate from, bust darts must be moved outside of the guide circle, which may have a diameter of 7-10 cm.

Thus the point of the dart must originate 3.5-5 cm from the bust point, except if you are making a strapless, form-fitting bustier.

- The width of the dart is determined by the angle, not its length. Thus, the wider the angle, the greater the bulge that will be covered by the dart.

- When a dart is shifted to another position for questions of style, the angle should remain the same. Should you have to split it into two or more darts, the sum of the angles has to equal the original angle.

- A dart originating from the side seam must never point downwards, for aesthetic reasons. In fact, a dart that points upwards has a slimming effect on the figure.



- Form-hugging clothing cannot do without darts, but they may be replaced by seams or gathers, or be absorbed by stylistic motifs.

BACK

The bodice back has two darts: the neck dart and the waist dart.

NECK DART

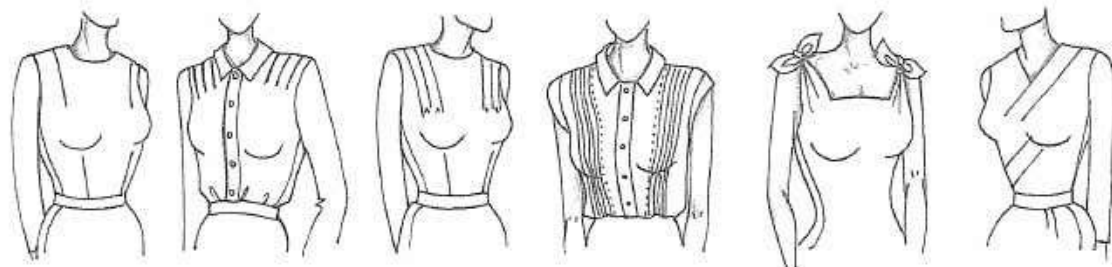
The neck dart can be moved, for reasons of style, to various positions along the neckline and the shoulder. Or it can be eliminated in the centre back or on the shoulder, absorbed by the looseness of fit, stylistic motifs, or gathers.

EXAMPLES OF THE USE OF DARTS

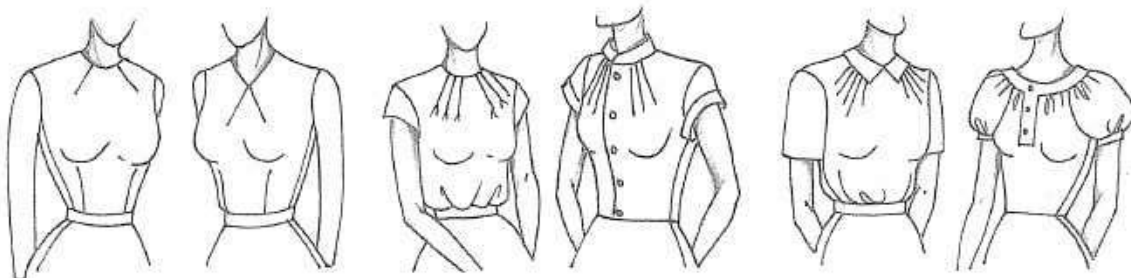
In the transformation of the flat pattern, it is essential to carry out an analysis of dart control or their absorption in gathers, pleats, fullness, cut, etc., to achieve the best results.

Bust darts can originate from the following points: from the shoulder, the neckline, the side seam, the armhole, and the centre front and they can be absorbed by the cut or by fullness.

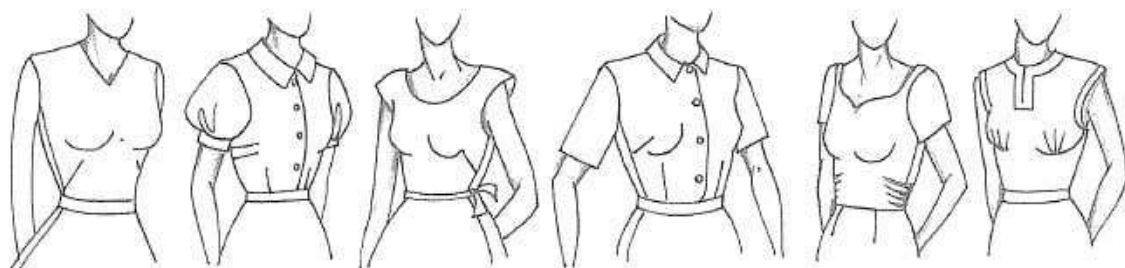
FROM SHOULDER



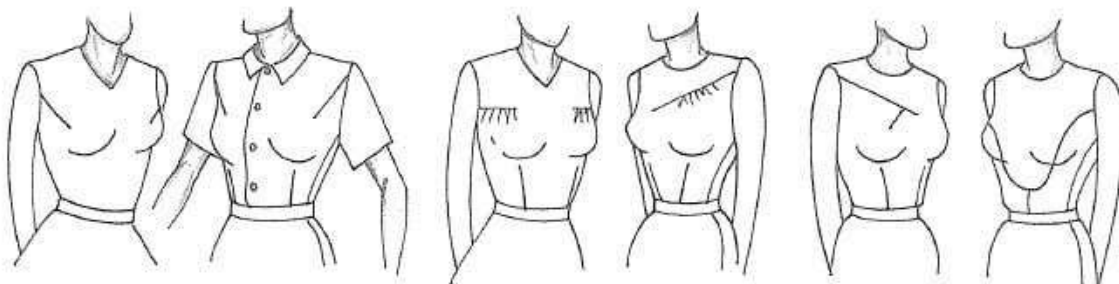
FROM NECKLINE



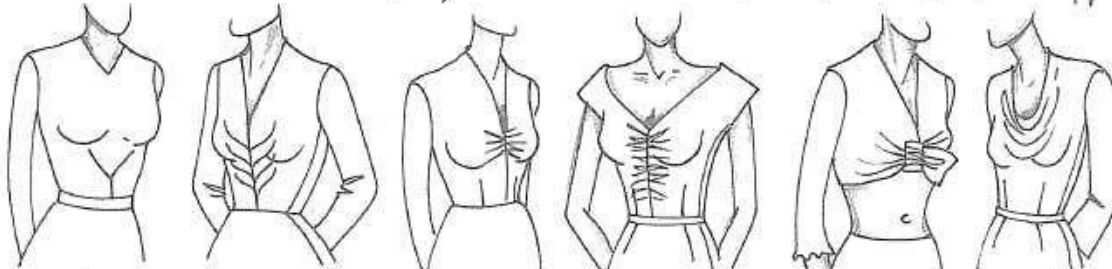
FROM SIDE SEAM



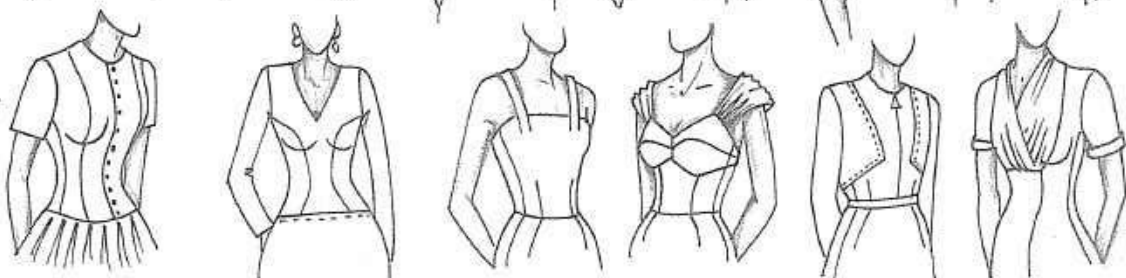
FROM ARMSCYE



FROM CENTRE FRONT



ABSORBED BY THE CUT



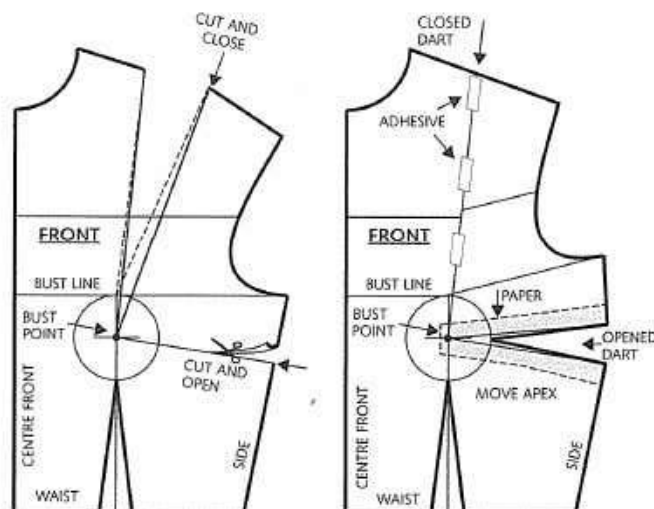
DART CONTROL TECHNIQUES

Many times, the bust dart has to be shifted for stylistic reasons to a position different from that of the basic block, that is, to the shoulder, or used to make gathers or a cut.

When alteration of the base or relocating the darts is called for, you must never cut the constructed base in order to keep it intact should you need to check the cuts; instead, you should copy all the cuts onto another sheet of tissue paper for patterns.

MOVING THE BUST DARTS

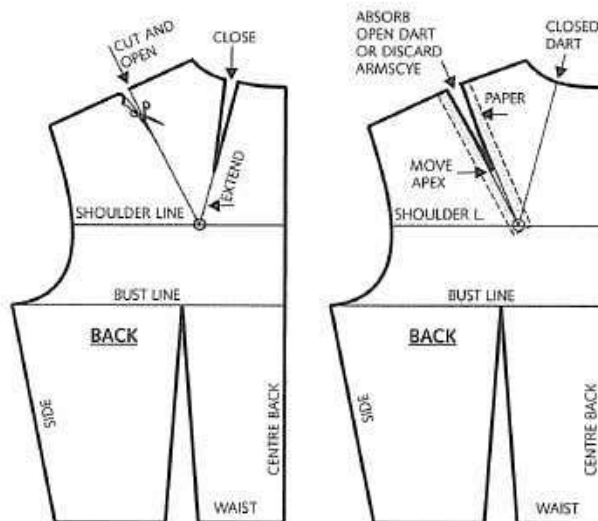
- After making the basic block according to the measurements and ease desired, move the point of the shoulder dart to the exact bust point.
- Trace off the new dart line in the desired position and following the stylistic instructions, with the apex originating from the bust point.
- Slash along the lines drawn and pivot the entire section of the pattern included between the two slashes, so that the two sides of the shoulder dart meet, while at the same time the new dart is opened on the side, as shown in the figure.
- Close the dart and fasten it with tape or paste.
- Paste a piece of tissue paper along the opening of the new dart and move the tip to the edge of the bust point circle guide (about 4 cm from the bust point).



MOVING THE NECK DART

The procedure for moving the neck dart is the same as that for the bust dart.

- Extend the first dart line up to the shoulder line.
- Trace off the new dart line in the desired position (shoulder, armhole, etc.).
- Slash along the lines drawn and pivot the entire section of the pattern included between the two slashes, so that the two sides of the neck dart meet, while at the same time the new dart is opened on the shoulder, as shown in the figure.
- Close the dart and fasten it with tape or paste.
- Paste a piece of tissue paper along the opening of the new dart and move the tip to the same distance as the closed neck dart.



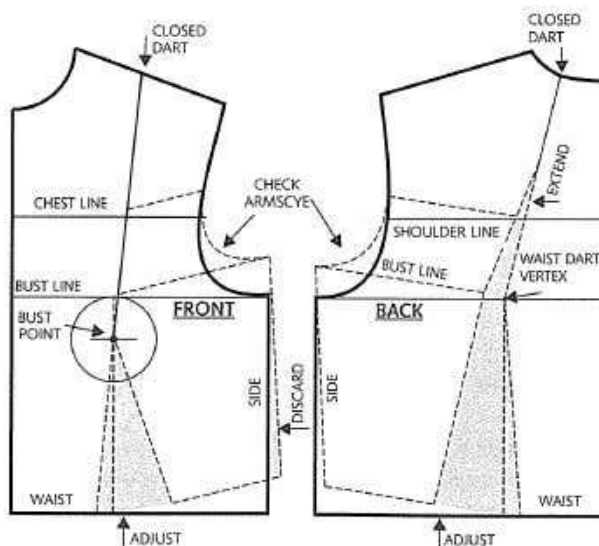
ELIMINATING DARTS

Front

- Move the tips of the shoulder and waist darts to the bust point.
- Slash and rotate the side part of the pattern to close the shoulder dart, while opening the waist dart.
- Connect the side with the waistline, correcting any irregularities.
- Check the measurements of the armhole and the chest.

Back

- Join the tips of the neck and waist darts.
- Slash and rotate the side part of the pattern to close the neck dart, opening the waist dart.
- Straighten the waistline, recovering the space in the armhole.
- Connect the side with the waistline.
- Check the measurements of the armhole and the shoulder.



A MORE GRACEFUL LOOK FOR THE PATTERN

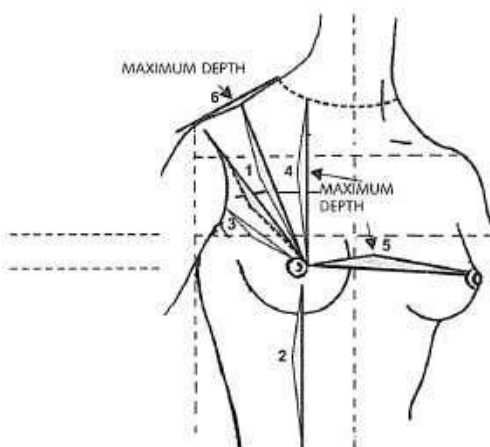
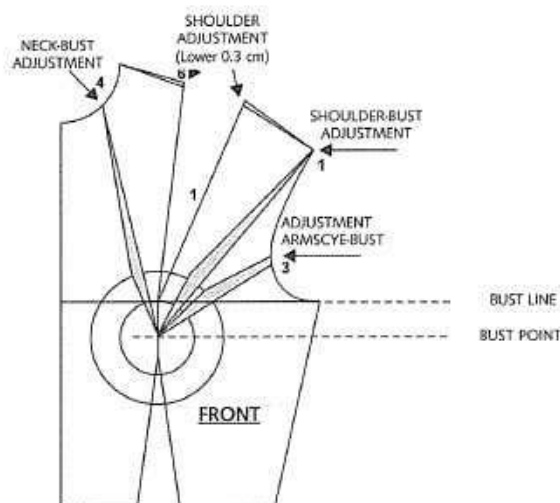
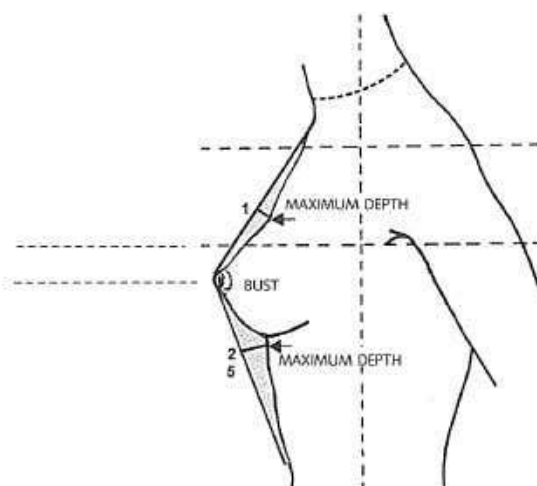
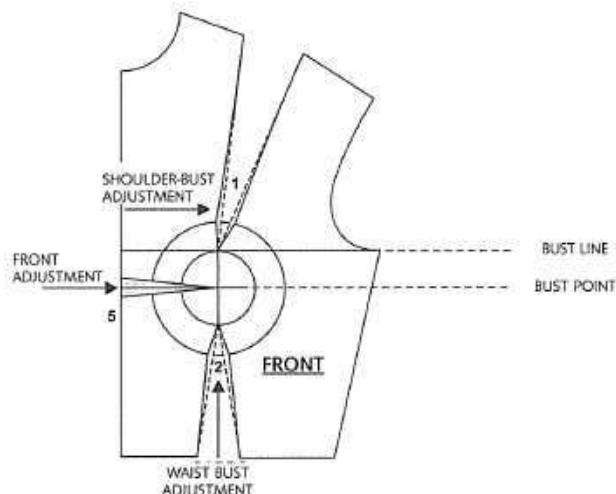
The bodice pattern block is conceived with a geometric layout constructed with straight lines, while the body has a more harmonious silhouette, with sinuous outlines and well-defined curves.

To give the paper pattern a harmonious look that more closely resembles the human figure, it is necessary to make

adjustments to the basic lines.

Below we show some of these adjustments to endow the pattern with a more graceful look.

The areas that require the greatest attention are usually the shoulders and the bust, where darts are inserted to lend shape to the garment.

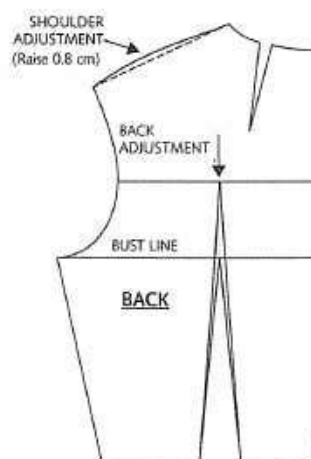


BODICE FRONT

- The shoulder line is lowered by 0.3-0.5 cm.
- The armhole-bust adjustment serves primarily for garments with a closely fitted sleeve.
- The neckline-bust and shoulder-bust adjustments serve to make the neckline lie flat and to avoid gaping.
- The centre front adjustment is carried out to take in the swell of the bust.
- The waist dart adjustment serves to harmonize the centre bust line.

BODICE BACK

- The shoulder line is raised by 0.3-0.5 cm.
- The waist dart adjustment may be used to make low-backed garments lie flat.

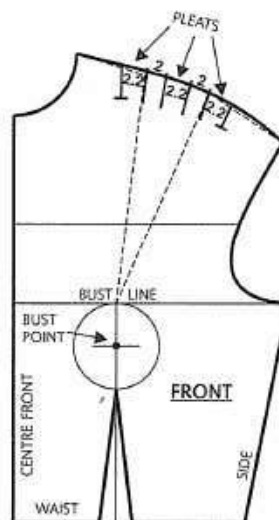


SHIFTING THE SHOULDER DART

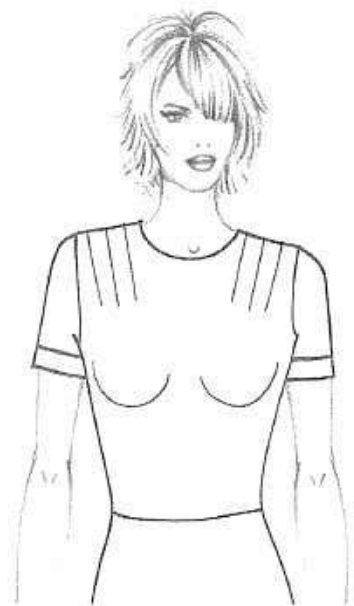
DART TRANSFORMED INTO THREE GATHERS



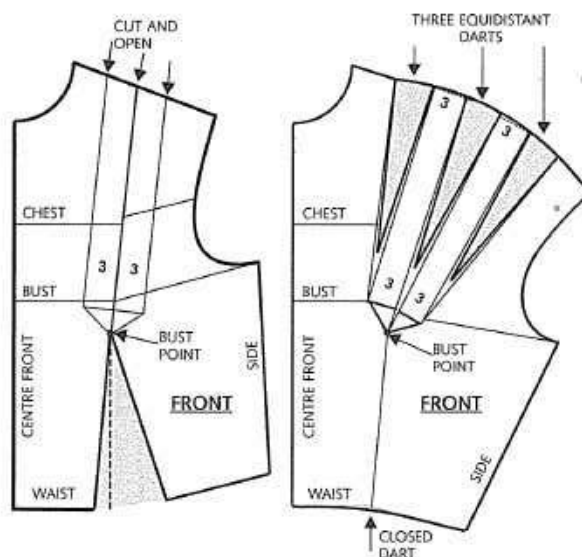
- Draw the basic bodice.
- Divide the dart width into three sections, leaving a 2-2.5 cm space between one section and the other.
- Draw lines from the points just drawn, converging on the dart tip.
- Finish the shoulder with a curved line.



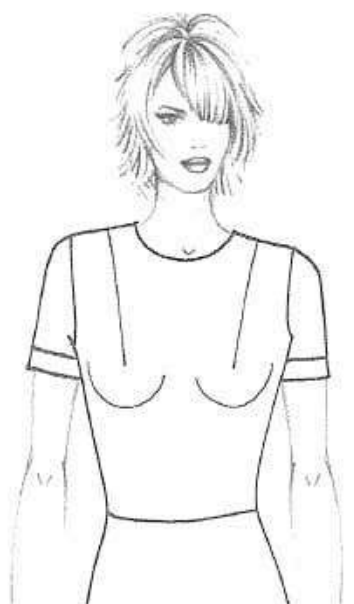
WAIST DART MERGED IN THE SHOULDER AND DIVIDED IN THREE



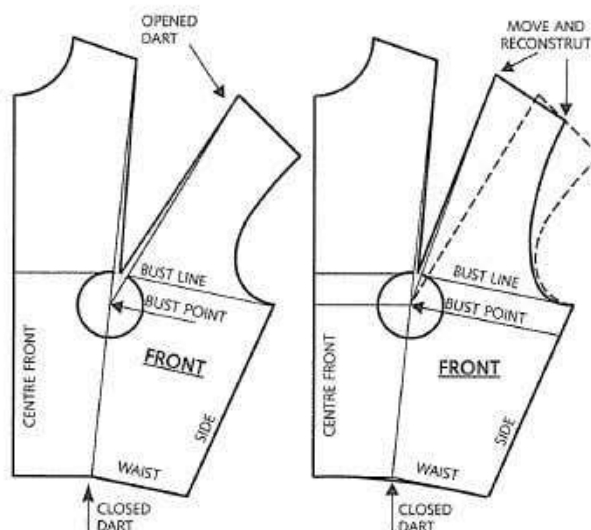
- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust point.
- Momentarily close the shoulder dart, opening the one at the waist.
- Draw three equidistant lines parallel to the closed shoulder dart line, as shown in the figure.
- Cut along these lines and reopen, subdividing the opening in three equal parts, matching the sides of the waist dart.
- Smoothly join the waistline and the shoulder line.



WAIST DART MERGED IN THE SHOULDER AND SUPPRESSED IN THE NECKLINE

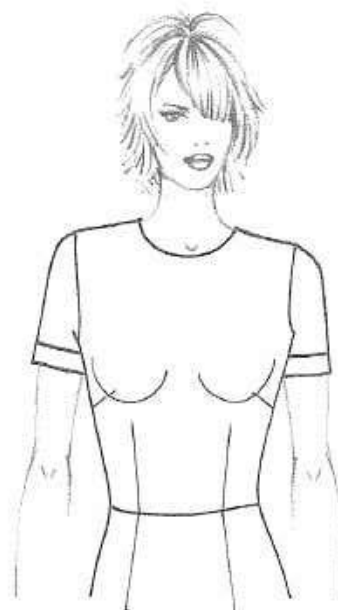
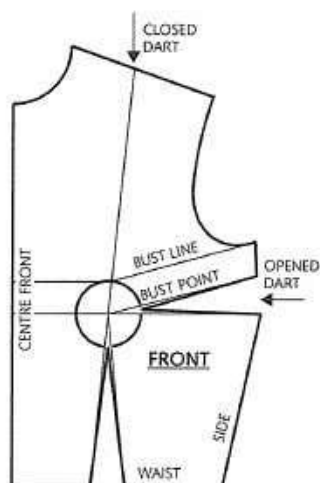


- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust centre.
- Slash and pivot the area of the pattern enclosed by the two darts until the two sides of the waist dart match, at the same time opening up the one on the shoulder.
- Copy the shoulder dart in its original position and reconstruct the shoulder and the armhole.

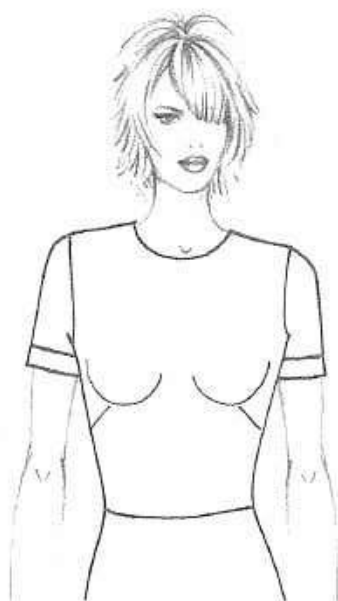
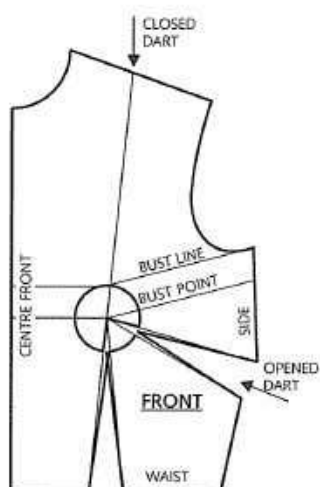


SHIFT THE DART TO THE SIDE SEAM

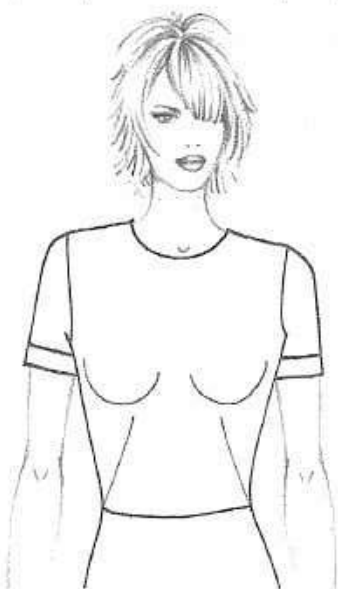
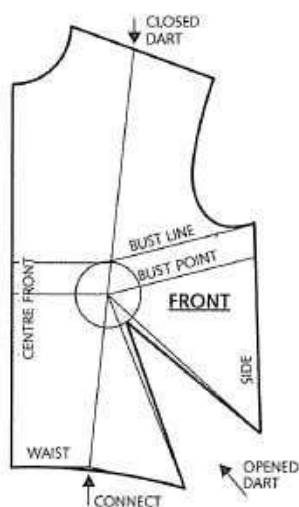
BUST DART MERGED INTO THE TOP OF THE SIDE



BUST DART MERGED MID-SIDE



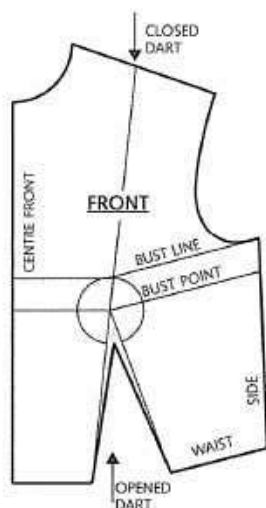
BUST AND WAIST DARTS MERGED INTO THE LOWER SIDE



- Draw the basic bodice.
- Move the tip of the dart to the bust point.
- Draw the new dart line from the bust point to the side line at the desired height.
- Slash along the drawn lines and pivot the entire pattern piece contained between the two slashes until the two

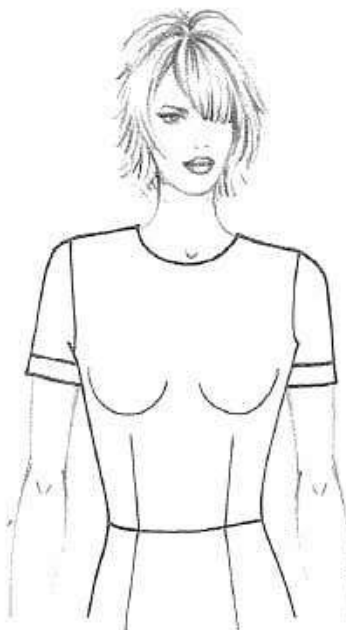
- sides of the shoulder dart meet, at the same time opening the new dart on the side.
- Fasten the edges of the closed dart with paste or tape.
- Shift the vertex of the new dart to the edge of the circle guide, about 4 cm from the bust point.

MOVING DARTS TO THE WAIST

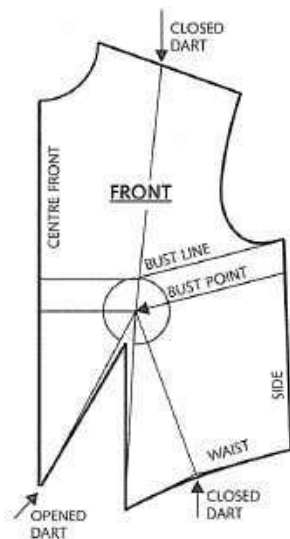


BUST DART MOVED TO THE WAIST

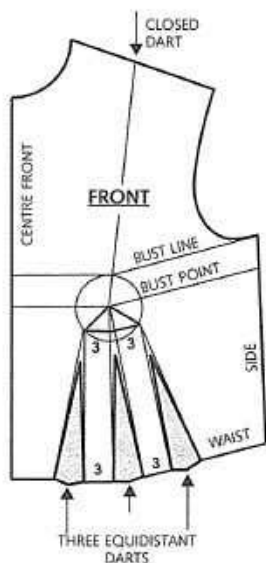
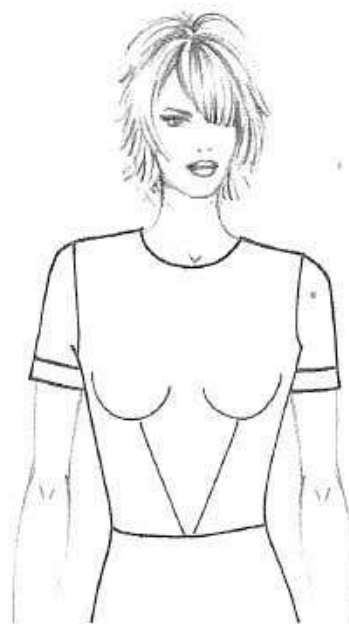
- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust centre.
- Draw the new dart line from the bust centre to the waistline at the desired position.
- Slash along the drawn lines and pivot the entire pattern piece contained between the two slashes until the two sides of the shoulder dart meet, at the same time opening the new dart on the waistline.
- Fasten the edges of the closed dart with paste or tape.
- Shift the vertex of the new dart to the edge of the circle guide, about 4 cm from the bust point.



BUST DART MERGED IN THE WAIST DART, SHIFTED TO THE CENTRE FRONT

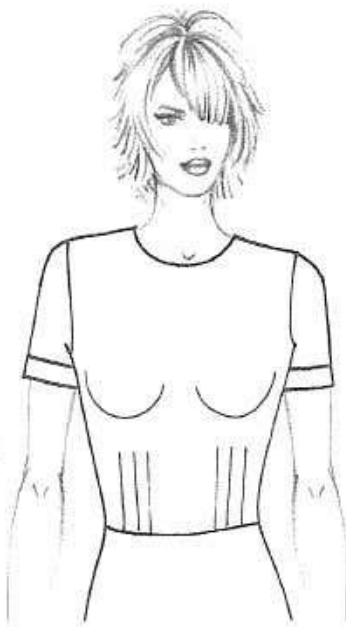


- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust centre.
- Draw the new dart line from the bust point to the waistline where it intersect with the one on the centre front.
- Slash along the drawn lines and pivot the entire pattern piece contained between the two slashes until the two sides of the shoulder dart meet, at the same time opening the new dart on the waist.
- Merge the original waist dart into the new dart.
- Fasten the edges of the closed dart with paste or tape.
- Shift the vertex of the new dart to the edge of the circle guide, about 4 cm from the bust point.

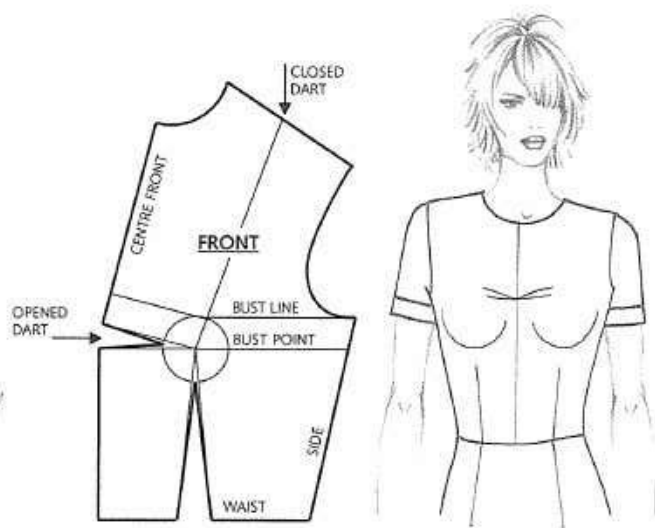


BUST DART MERGED IN THE WAIST, DIVIDED BETWEEN THREE DARTS

- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust centre.
- Momentarily close the waist dart, opening the one on the shoulder.
- Draw three equidistant lines parallel to the closed waist dart line, as shown in the figure.
- Slash along these lines and reopen them, dividing the opening in three equal parts, until the two sides of the shoulder dart meet.
- Carefully finish the waist and shoulder lines.

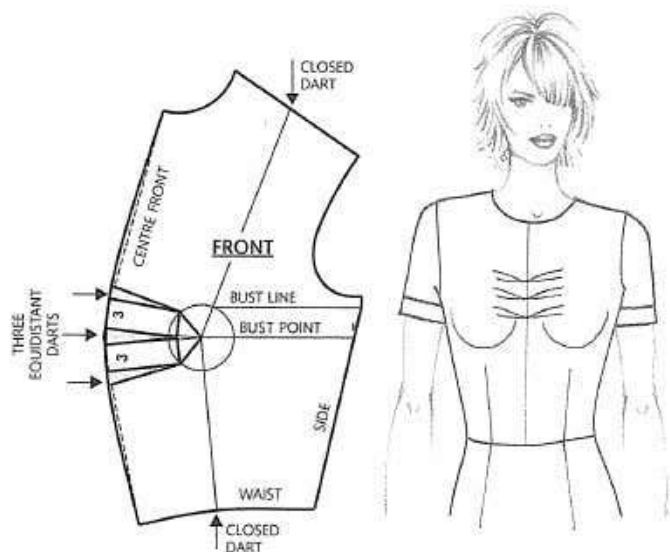


SHIFTING DART TO THE CENTRE FRONT



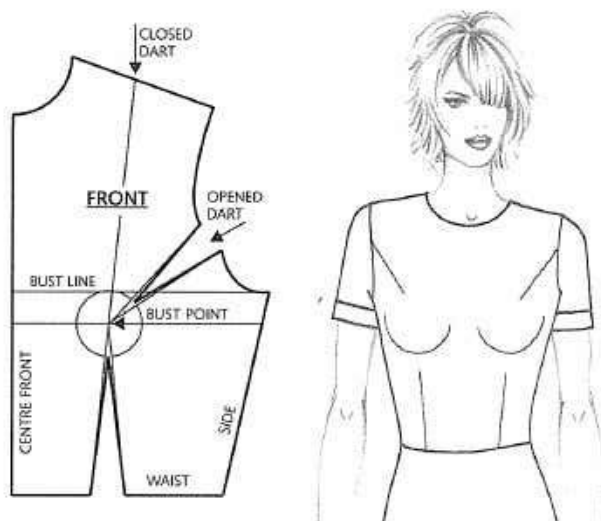
- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust centre.
- Draw the new dart line from the bust centre to the centre front at the desired position.
- Slash along the drawn lines and pivot the entire pattern piece contained between the two slashes until the two sides of the shoulder dart meet.

Three darts on the centre front

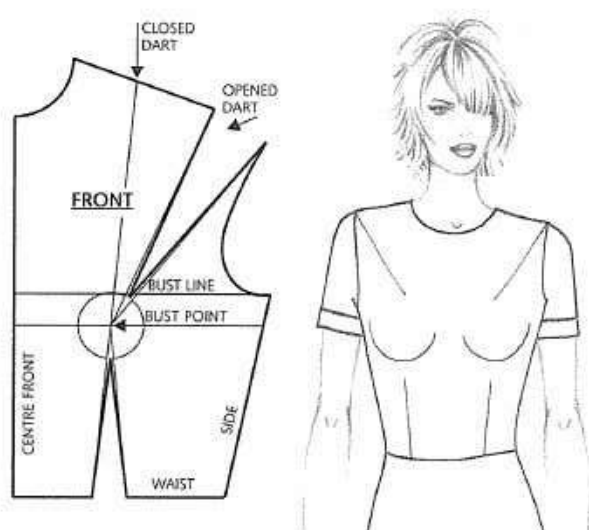


- After drawing the line of the new dart from the bust point to the centre front, draw three equidistant lines parallel to this one, as far as the circle guide.
- Slash along these lines and open them, dividing the opening in three equal parts, until the two sides of the shoulder dart and those of the waist dart meet.
- Carefully finish the waist and centre front lines.

SHIFTING THE DART TO THE ARMSCYE



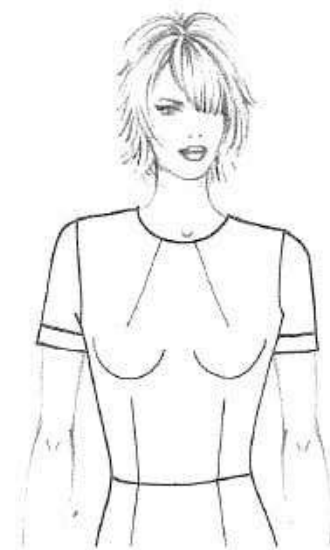
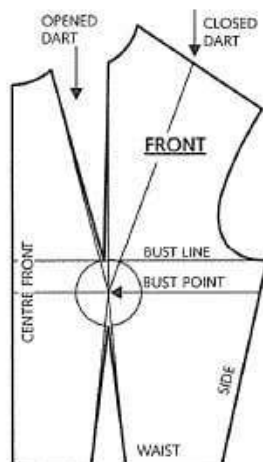
- Draw the basic bodice.
- Move the tip of the dart to the bust centre.
- Draw the new dart line from the bust centre to the underarm line at the desired position.
- Slash along the drawn lines and pivot the entire pattern piece contained between the two slashes until the two sides of the



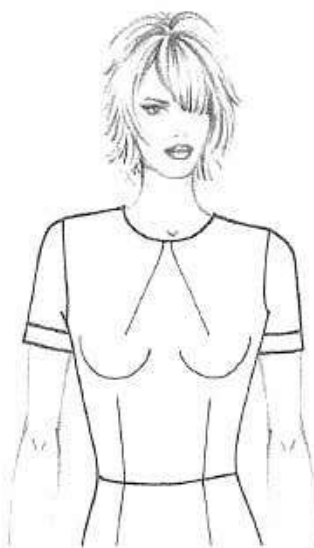
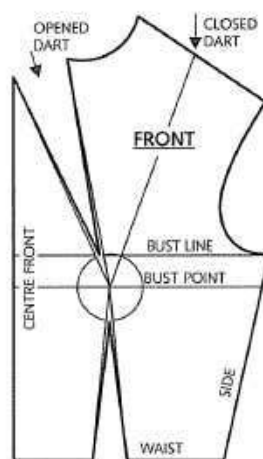
- shoulder dart meet, at the same time opening the new dart on the armseye.
- Fasten the edges of the closed dart with paste or tape.
- Shift the vertex of the new dart to the edge of the circle guide, about 4 cm from the bust point.

SHIFTING THE DART TO THE NECKLINE

BUST DART MERGED WITH THE MID-NECKLINE



BUST DART MERGED WITH THE CENTRE NECKLINE

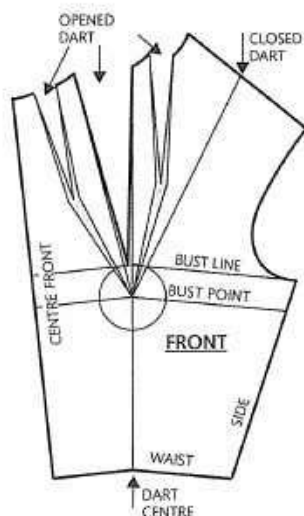


- Draw the basic bodice.
- Move the tip of the shoulder dart to the bust point.
- Draw the new darts line from the bust centre to the neckline line at the desired position.
- Slash along the drawn lines and pivot the entire pattern piece contained between the two slashes until the two sides

of the shoulder dart meet, at the same time opening up the new dart on the neckline.

- Fasten the edges of the closed dart with paste or tape.
- Shift the vertex of the new dart to the edge of the circle guide, about 4 cm from the bust point.

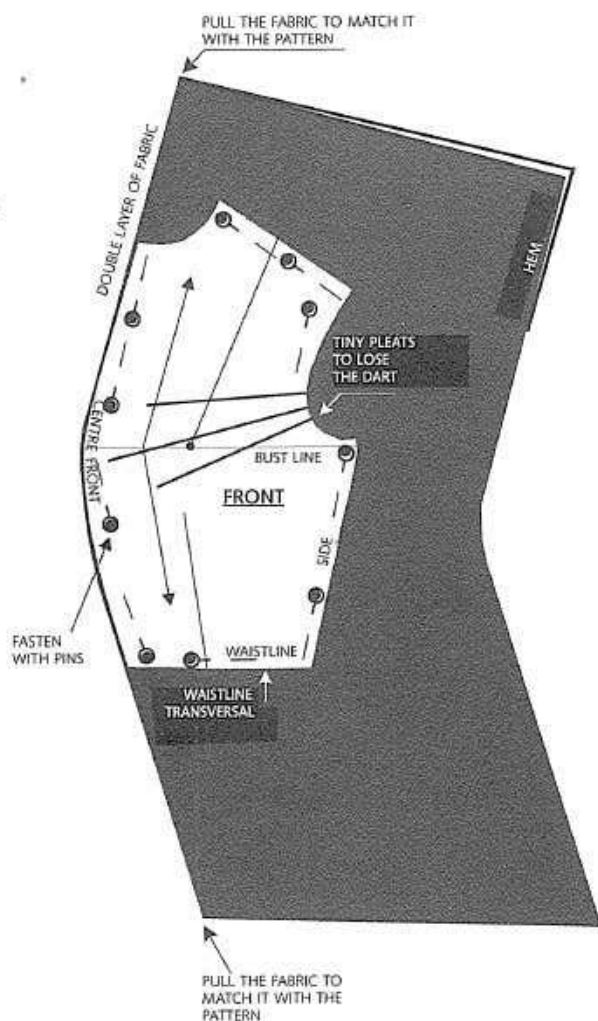
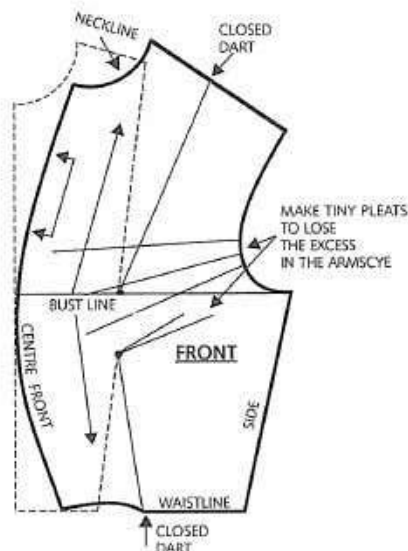
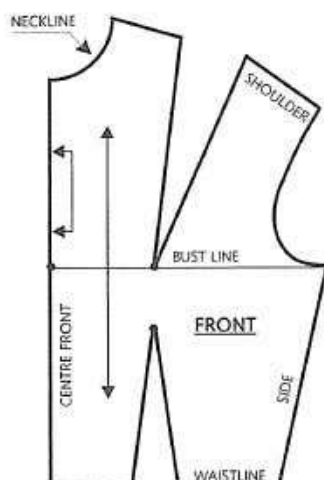
BUST DART MERGED IN THE NECKLINE AND DIVIDED IN THREE



- After moving the shoulder dart to the centre of the neckline, as described above, draw two more lines from the bust point to the neckline between the two sides of the shifted dart and the two sides of the neckline.
- Slash along these lines and the waist dart lines and pivot the pattern pieces until the two sides of the waist dart meet at its centre, as shown in the figure.



SHAPING THE FRONT WITHOUT DARTS



The whole front of a bodice or a dress can be shaped using an empirical system, eliminating unattractive darts. This is only possible with soft, lightweight fabrics and proceed as follows:

- Draw the basic bodice or dress with darts on soft tissue paper.
- Close the bust and waist darts losing the excess in the armhole, making tiny pleats and applying tape to the closed darts.
- The pattern thus obtained is laid out on a double layer of fabric, with the centre front edge on the fold, fastening it with straight pins.
- After cutting the fabric, it will take the desired form, including the difference usually obtained by making the darts.

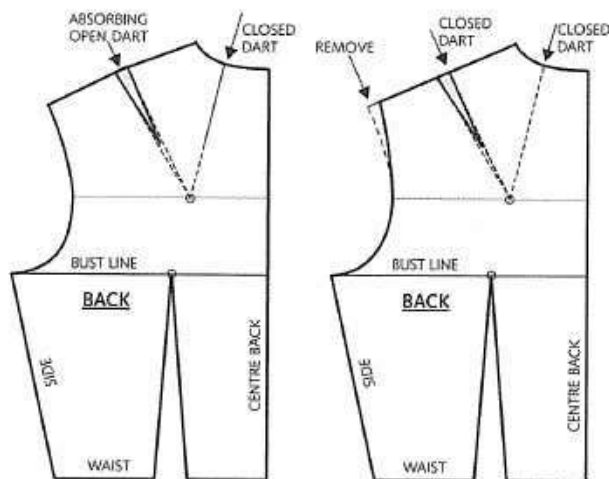
This procedure is designed only for *haute couture* dresses, especially if the fabric is striped, floral, or with precious appliques, to avoid unattractive darts, usually inevitable and indispensable for fitting the dress to the figure.

MOVING THE BACK DARTS

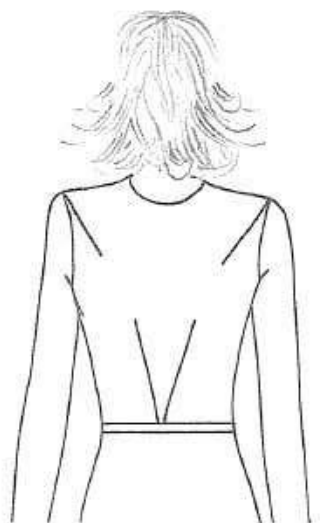
NECKLINE DART MOVED TO THE CENTRE SHOULDER



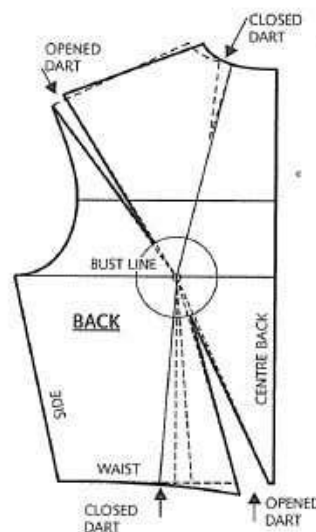
The back neckline dart must be removed when possible, as it is unattractive. It can be eliminated in the following ways:
 1) By merging the dart in the centre back, if there is a cut or a zipper or a fastening.
 2) By moving the dart to the shoulder line, and thus allowing the dart width to be absorbed in the assembly of the shoulders.
 3) By removing the dart to the armscye, after having shifted it to the shoulder line.



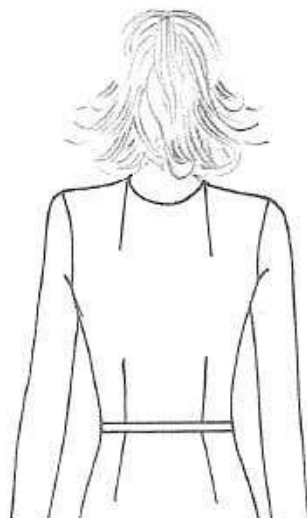
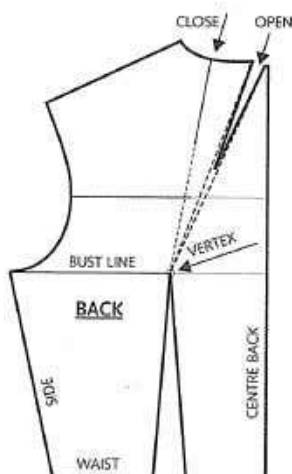
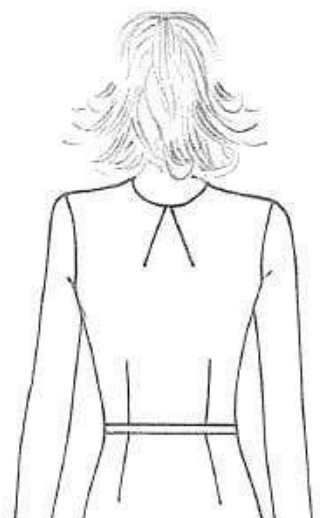
NECKLINE DART ON THE OUTER SHOULDER POINT AND WAIST DART SHIFTED TO THE CENTRE BACK



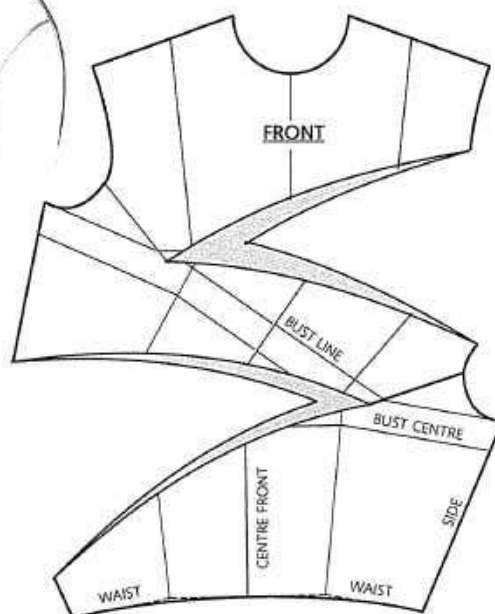
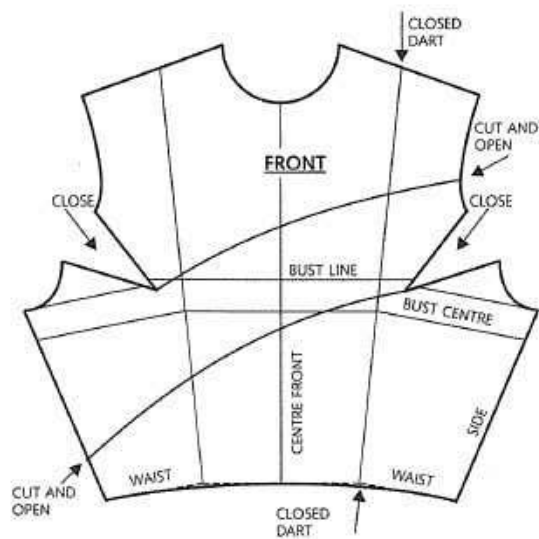
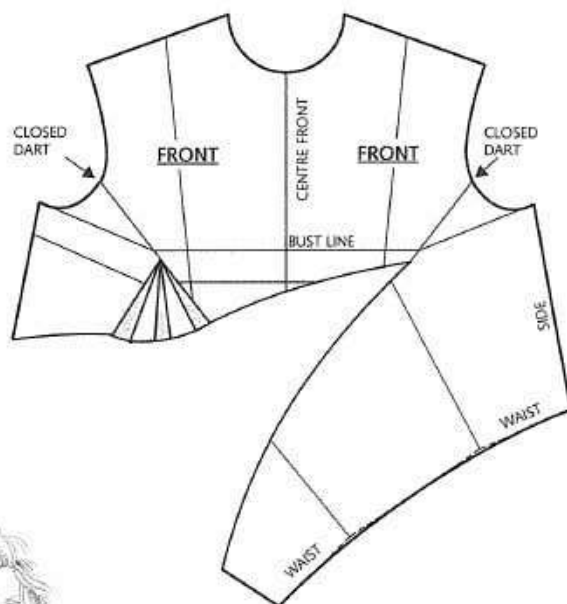
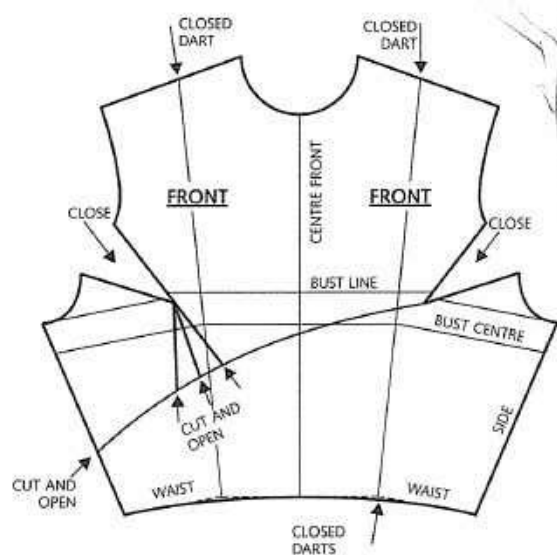
- Extend the side of the neckline dart to where it converges with the tip of the waist dart, on the bust line.
- Draw the line for the new dart in the position desired, on the outer shoulder point.
- Draw the line for the new waist dart shifted to the centre back.
- Slash and pivot the pattern pieces to close the previous dart and open the new one.
- Carefully finish the lines.



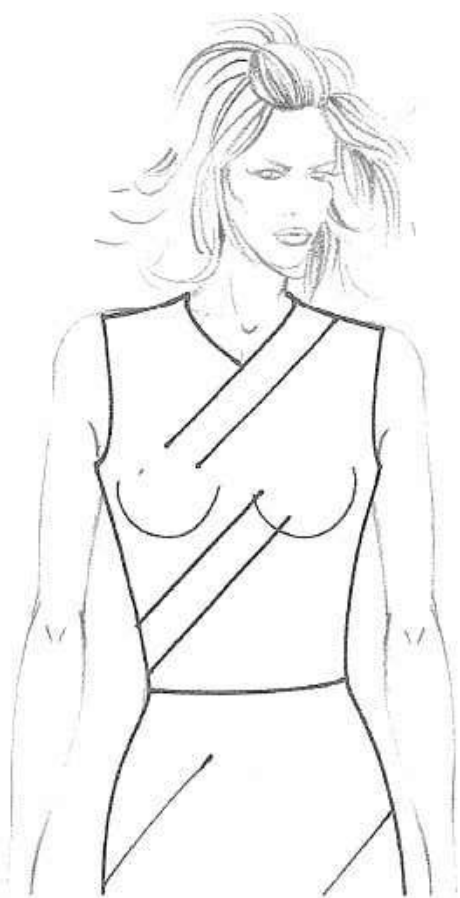
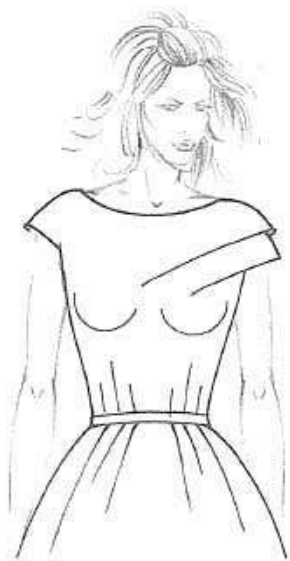
NECK DART MOVED TO CENTRE BACK AND THE SHOULDER POINT



FANCY ASYMMETRICAL DARTS



FANCY DART EXERCISES



MEN'S SHIRTS AND TROUSERS



Measurements	214
Measurement procedure	215
Industrial chart of men's sizes	217
Shirts	218
Basic classic shirt block	218
Yoked shirt	220
Shirt with yoke front and back	221
Shirt sleeve	222
Collars	223
Short-sleeved shirt	224
Shirt with front seam	225
Asymmetrical shirt	226
Trousers	227
Basic men's trouser block	228
Alteration of the front	229
Application of the centre crease line	230
Correction of defects	231
Seam allowances	234
Work plan	235
Cuffed trousers	236
Short pants	237
Base jeans	238
Basic pants block for joggers	239
Jodhpur pants	240
Basic overall	241
Short overall	242

MEASUREMENTS

PROPORTIONAL VALUES

In the figure study, the designer and the artist use the head as a unit of measure for the entire human figure, both in height and in breadth.

In men, the shoulder breadth is three times the width of the head, while the height is eight times the height of the head, from the hairline to the bottom of the chin. In this case, it is worthwhile assigning proportional values to establish the lengths and the breadths of the figure.

Length value

- A-B Head height = Stature : 7.49 cm.
- B-C Underarm level = Stature : 7.49 cm.
- B-D Waist length = Stature : 3.6 cm.
- D-E Side height = Stature : 8 cm.
- D-F Body rise = Stature : 6.57 cm.
- D-G Knee height = Stature : 3 cm.
- D-H Leg length = Stature : 1.65 cm.

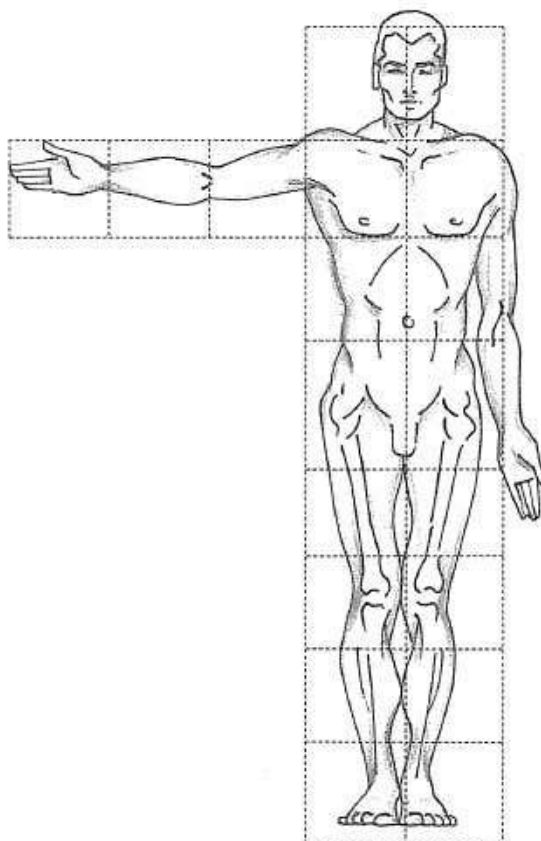
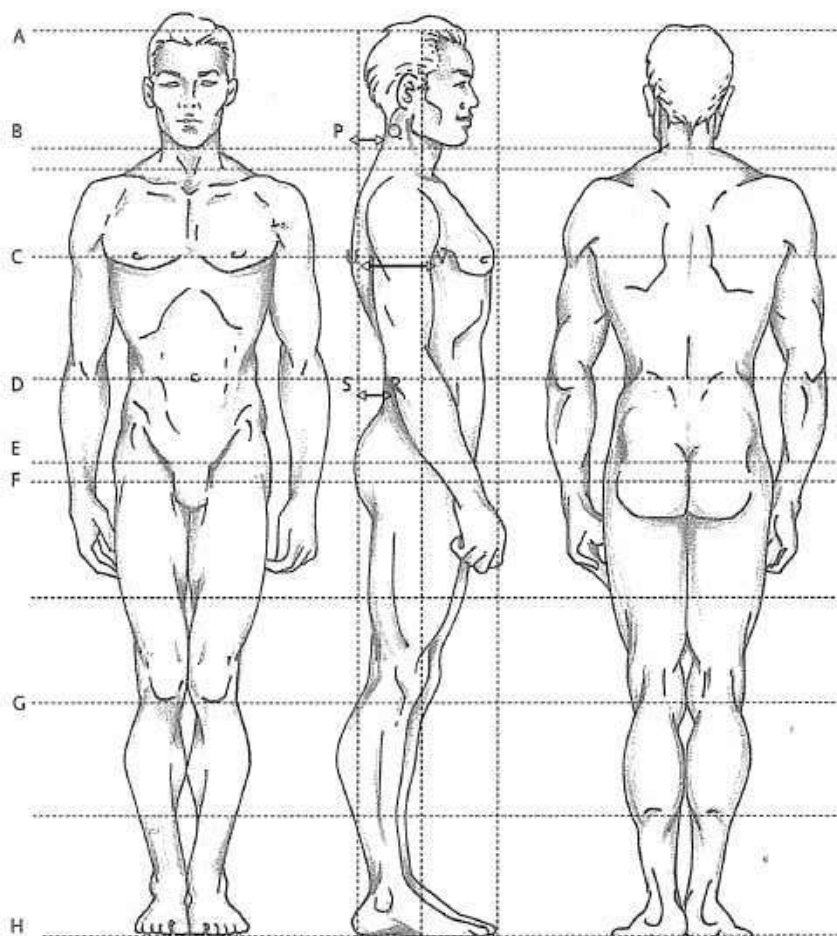
Width value

- CHEST GIRTH = Stature : 1.73 + ease (increase and reduce 2 cm each 5 cm of height).
- WAIST CIRCUMF. = Chest minus $\frac{1}{12}$ - chest + ease.
- HIP CIRCUMF. = Chest plus $\frac{1}{24}$ - chest + ease.
- NECK CIRCUMF. = $\frac{7}{16}$ chest.
- SUP. ARM CIRCUMF. = $\frac{1}{10}$ chest x 3.14.
- SHOULDER WIDTH = $\frac{7}{16}$ chest.
- P-Q Sup. Back curve = $\frac{1}{20}$ chest.
- R-S Back prominence = 1-2.5 cm.
- I-L Dropped shoulder = $\frac{1}{20}$ chest.

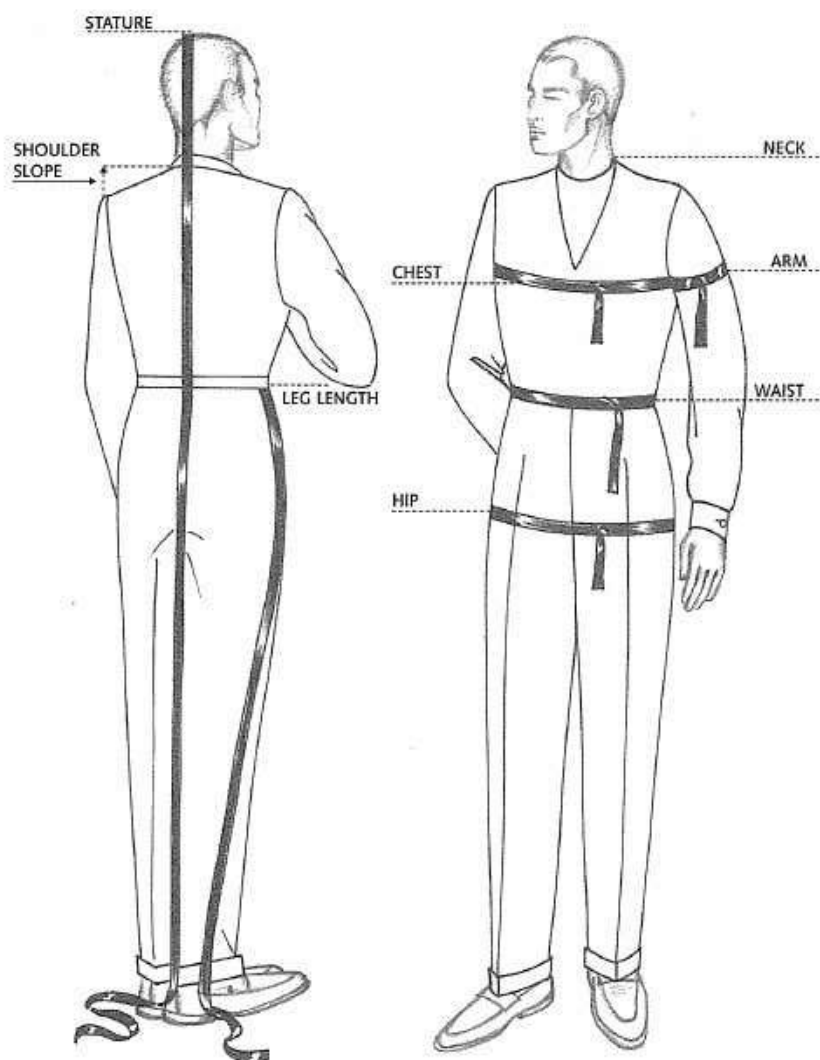
MEASUREMENTS OF THE "NORMAL TYPE"

1.70 M TALL

- HEAD HEIGHT..... 23.7 cm
- UNDERARM LEVEL..... 23.7 cm
- BACK WAIST HEIGHT..... 47 cm
- FRONT WAIST HEIGHT..... 50 cm
- SIDE HEIGHT..... 21 cm
- BODY RISE..... 25.7 cm
- KNEE HEIGHT..... 56.6 cm
- DROPPED SHOULDER..... 4.8 cm
- SLEEVE LENGTH..... 60 cm
- ELBOW HEIGHT..... 29 cm
- CHEST GIRTH..... 96 cm
- WAIST CIRCUMF..... 88 cm
- HIP CIRCUMF..... 96 cm
- NECK CIRCUMF..... 42 cm
- ARM CIRCUMF..... 30.1 cm
- SHOULDER WIDTH..... 44 cm
- BACK CURVE..... 4.8 cm
- TUMMY..... 2 cm



MEASUREMENT PROCEDURE



STATURE

By stature is meant the total length of the body. The measurement is taken, as shown in the figure, from the level of the top of the head, then applying the measuring tape to the base of the neck and following the figure as far as the hollow of the back, and then from the level of the gluteus down to the ground.

This measurement should not include the heel, or at least should specify the point corresponding to the shoe seam.

LEG LENGTH

It is measured placing the measuring tape on the last spurs of the iliac bone, without, however, entering the hollow of the waistline, and then dropping in a straight vertical line to the ground or to the shoe seam.

SHOULDER SLOPE

This can be measured using a ruler placed horizontally resting on the nape of the neck, looking on from the back, taking the measurement at the outside of the shoulder bone.

CHEST GIRTH

To measure the chest, the subject must be relaxed and the arms completely at rest.

The tape measure must loop around just under the arms,

held parallel to the floor, snugly but softly enough to enter between the shoulder blade and leaving no gap in the hollow of the back.

WAIST CIRCUMFERENCE

This is measured holding the tape measure perfectly horizontal at the waistline, making sure that the subject is wearing normal clothing, and nothing bulky.

HIP CIRCUMFERENCE

The subject must take a natural stance with legs together. The tape measure must be horizontal and loop around the fullest part of the hips. The measurement must be taken holding the tape snugly to the figure.

ARM CIRCUMFERENCE

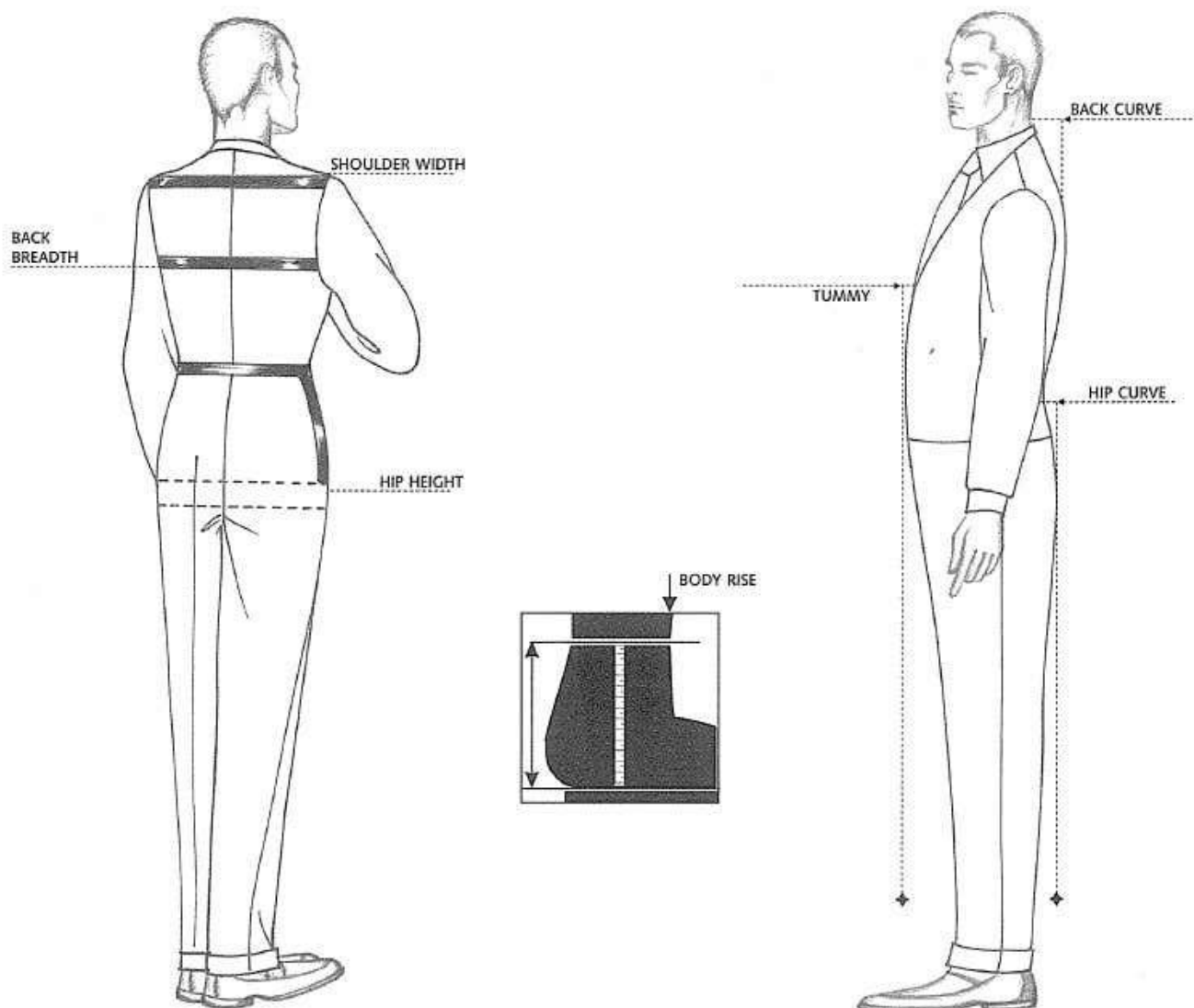
The arm must be held in a natural position and the tape measure should be snugly tucked under the arm. The measurement should be taken with the tape measure wrapped securely around the arm.

NECK CIRCUMFERENCE

This measurement can be taken on the bare neck, for shirts, or wearing a shirt, for jackets.

In this case, take care that the shirt collar is appropriate. Loop the tape measure around the nape of the neck, snugly but not tightly.

MEASUREMENT PROCEDURE



SHOULDER WIDTH

This is measured at shoulder level from one tip to the other, holding the tape horizontally.

BACK BREADTH

This is measured at armpit level, from the start of one arm to the other, taking care not to enter in the hollow.

HIP HEIGHT

This is measured from the waistline to the fullest point of the hips, keeping the tape snug against the figure all along the side.

BODY RISE

This measurement can be taken with the subject seated on a flat stool, assessing the distance from the waistline to the level surface of the stool.

BACK CURVE

This is an important measurement, and easy to discover. Hold a ruler vertically at the centre of the back and measure the distance from the neck to the ruler.

HIP CURVE

Hold a ruler to the centre of the hip in the back, at the fullest point, and measure the distance from the waistline to the ruler.

TUMMY

To take this measurement, have the subject's position at ease, but not too relaxed, so as not to err in excess. Place a ruler on the fullest part of the abdomen and holding it perfectly vertically, measure the distance between it and the hip line.

INDUSTRIAL CHART OF MEN'S SIZES

CHART OF SIZES WITHOUT EASE

CIRCUMFERENCE MEASUREMENT						
SIZE	44	46	48	50	52	54
Chest girth	88	92	96	100	104	108
Waist circumference	80	84	88	92	96	100
Hip circumference	89	92	96	100	105	110
Back shoulder width	42	43	44	45	46	47
Sector* width	10	10.5	11	11.5	12	12.5
Neck circumference	40	41	42	43	44	45
LENGTH MEASUREMENT						
STATURE	170	172	175	176	178	180
Front waist length	45.2	46.3	47	47.7	48.4	49.1
Back waist length	43.2	44.3	45	45.7	46.4	47.1
Armhole depth	18	18.2	18.5	18.9	19.3	19.7
Elbow length	29	30	31	32	33	34
Sleeve length	60	61	62	63	64	65
Hip height	19.2	19.6	20	20.4	20.8	21.2
Body rise	23.2	23.6	24	24.4	24.8	25.2
Knee height	58	59	60	61	62	63
External leg length	104	106	108	110	112	114

* Control measures

EASE VALUES BASED ON THE GARMENT TYPE

CLOTHING TYPES	Swimsuits and Leotards	Tops and Bodices	Shirt Suit and Vest	Bolero and Fitted Jacket	Loose jacket Fitted Overcoat	Loose Jacket Parka	Duster Raincoat Cloak	Padded Parka
Chest and bust circumference	-4 / -2	0 / 2	4 / 8	10 / 12	14 / 16	18 / 20	22 / 24	28/32
Waist circumference	-2.5/-1	0/-1.5	2.5/4	5/6	8/10	-	-	-
Hip circumference	-4/-2	0/2	4/8	10/12	14/16	18/20	22/24	28/32
Superior arm circumference	-1.5/-0.5	0/1	1/1.5	1.5/2	2.5/5	3.5/7	4.5/8.5	6/10
Back shoulder width	-1.5 / -0.5	0 / -0.5	1 - 1.5	1.5 - 3	3.5 - 4	4.5 - 5	5 - 5.5	7 - 8
Front and back waist length	-	-	-	1	2	2	2	3/4

SHIRTS

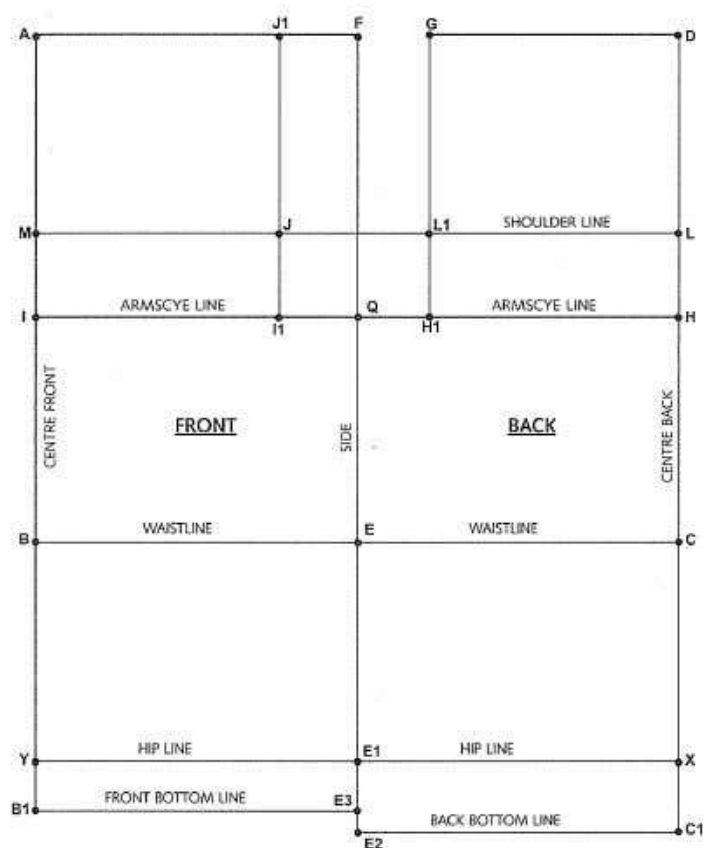
BASICS

In male fashion, the shirt is the most important element of classical style, and it is, together with the jacket and tie, the quintessence of dressing in harmony with the urban executive world.

The shirt, especially when made-to-measure, must have a certain ease built in, not excessive, but enough to permit comfortable movement.

The cuffs must be perfectly snug around the wrists and show about 1.5 cm below the jacket sleeve, while the excess fabric above the cuff must be distributed evenly through regular pleats. The collar, too, must be snug against the neck, not too tight, but never too loose. It is best to avoid shapes that are too high or too low. The most popular collar styles are the classic one (4-4.5 cm high), the Windsor collar, and the Button-Down.

BASIC CLASSIC SHIRT BLOCK



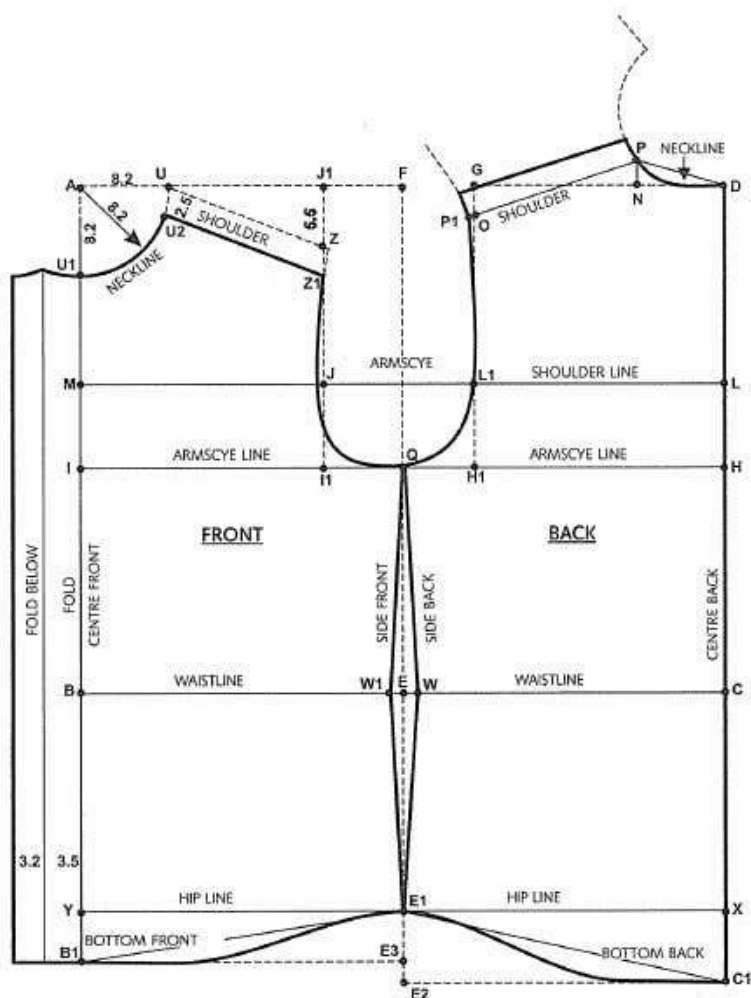
Measurement: Stature 170 cm. - Chest circumf. 96 cm. - Chest fitting 24-28 cm. - Neck circumf. 42 cm. - Shirt neckline 46 cm.

Basic pattern construction

- Draw a right angle A-B-C, with:
- A-B equal to the Front Waist length (e.g.: 47 cm).
- B-C equal to half circumference of the chest + shirt ease 24 cm (e.g.: $96 + 24 = 120 : 2 = 60$ cm).
- C-D = Back Waist length (e.g.: 45 cm).
- B-E = half B-C.
- A-F = like B-E. Draw E-F (SIDE LINE).
- D-H = half C-D (e.g.: $45 : 2 = 22.5$ cm).
- Draw H-I. UNDERARM LINE.
- D-G measures $\frac{1}{2}$ Shoulder Width + 1.

- (e.g.: $\frac{1}{2}$ Shoulder Width $22 + 1 = 23$ cm).
- H-H1 like D-G. Draw H1-G.
- H1-I1 $\frac{1}{5}$ H-H plus 2 cm (e.g.: $60 : 5 = 12 + 2 = 14$ cm).
- Draw I1-J1 parallel to H1-L1-G.
- H-L $\frac{1}{3}$ of D-H (e.g.: $23.5 : 3 = 7.8$ cm). Draw L-M.
- B-Y and C-X Side height (e.g.: 20 cm).
- Draw Y-X. HIP LINE.
- D-C1 = Total shirt length (e.g.: 75 cm).
- Y-B1 like X-C1 less 2 cm.
- Draw C1-E2 and B1-E3. Shirt Tail.



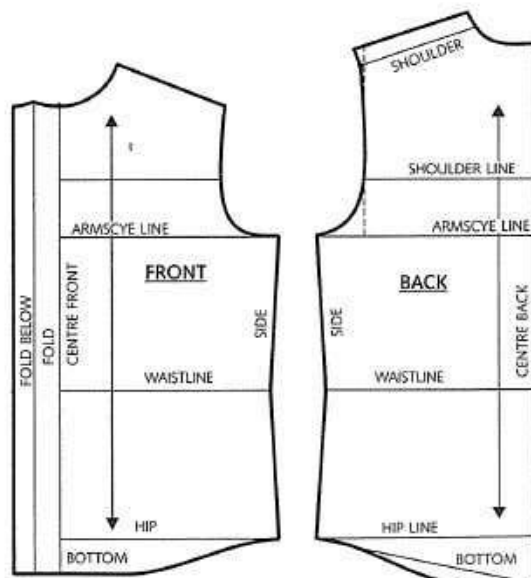


Back

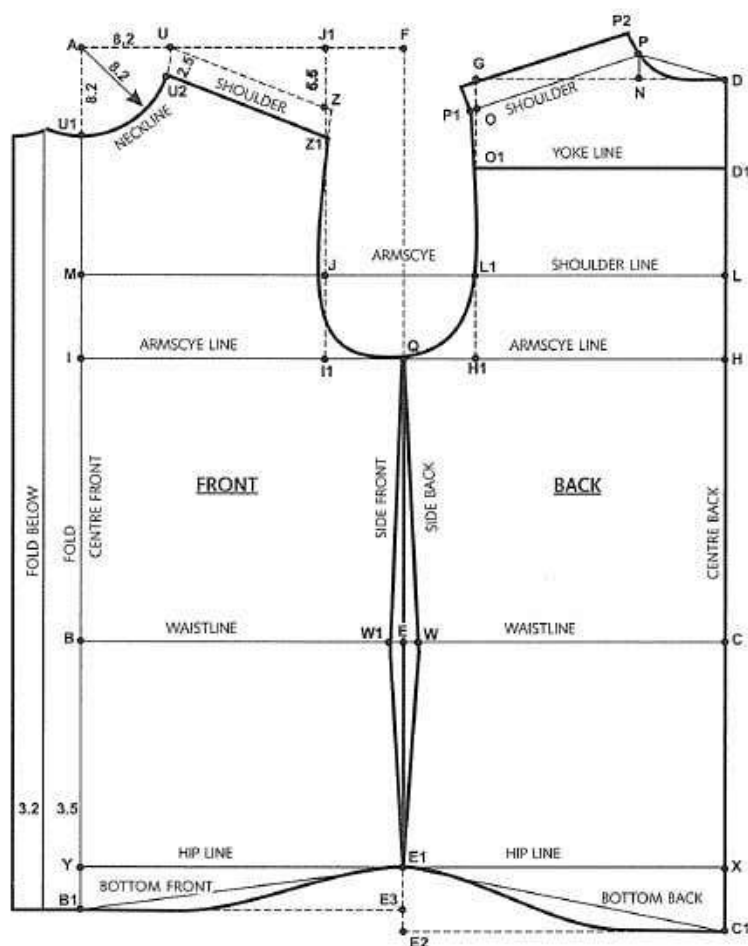
- G-O = 2.5 cm.
- D-N = $\frac{1}{3}$ D-G + 0.6 (e.g.: 23: 3 = 7.6 + 0.6 = 8.2 cm).
- N-P 2.5 cm. Draw D-P.
- Draw P-O-P1 with measure shoulder length + 1 cm (e.g.: 17 cm).
- Point Q half H-I.
- Draw P1-L1-Q as shown in the figure.
- E-W 1.5 cm or as needed.
- Draw the guideline C1-E1.
- Draw the bottom line as shown in the figure.

Front

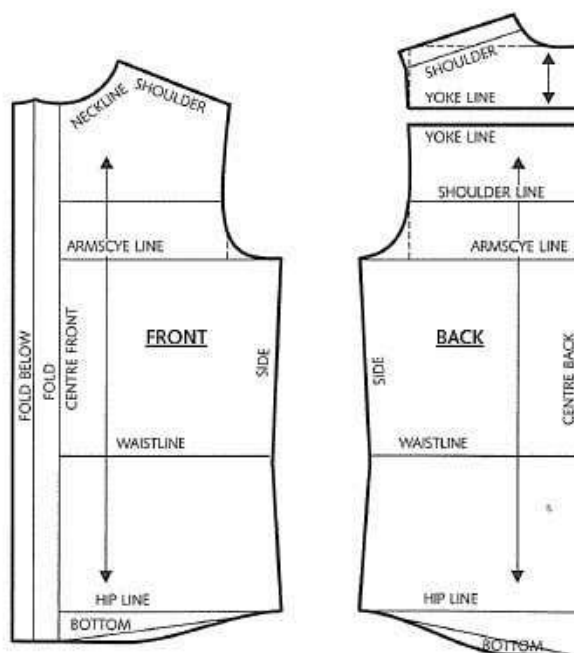
- A-U = $\frac{1}{3}$ D-G of the back + 0.6 cm (e.g.: 23: 3 = 7.6 + 0.6 = 8.2 cm).
- Draw the bow U-U1.
- Lower U1 of 1 cm.
- J1-Z = 5-5.5 cm.
- Draw U-Z with equal measure to P-P1 of back.
- Draw Z-J-Q as shown in the figure.
- U-U2 and Z-Z1 = 2.5 cm.
- E-W1 like E-W.
- Draw the guideline B1-E1.
- Draw the back bottom line as shown in the figure.
- Copy the U-U2T-ZZ-Z part and move it to the back shoulder line to bring the shoulder point forward.



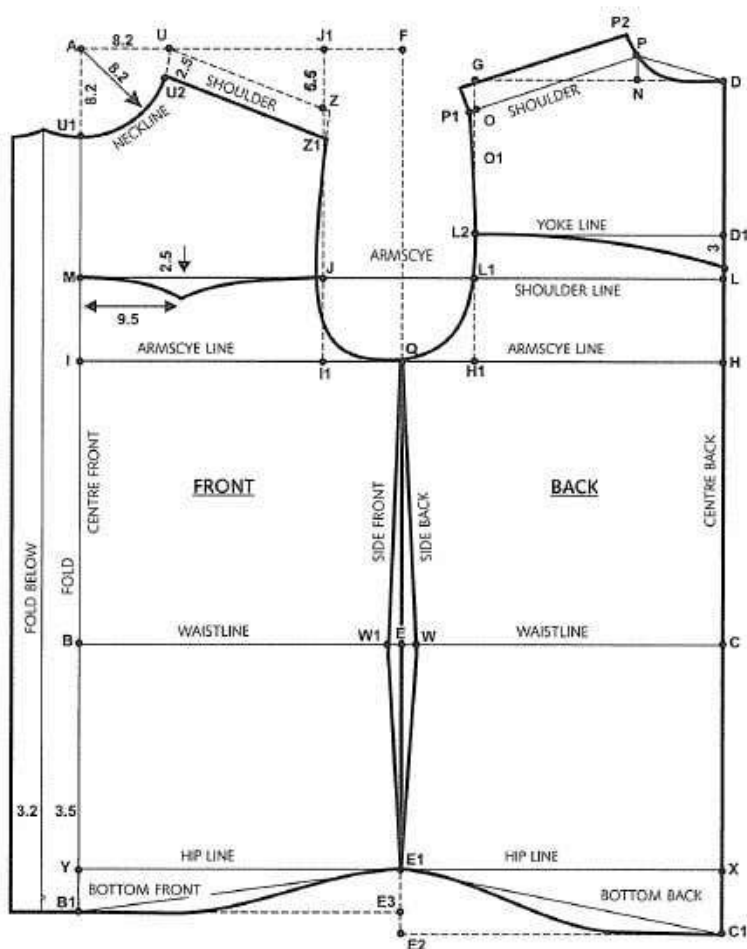
YOKED SHIRT



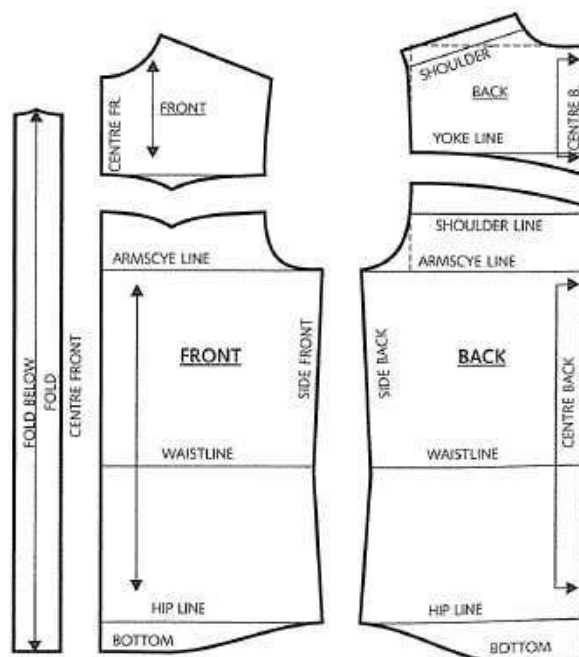
- Draw the basic pattern of the classic shirt.
- D-D₁ = 8-10 cm.
- Draw D₁-O₁. YOKE LINE.
- Cut and divide the parts.



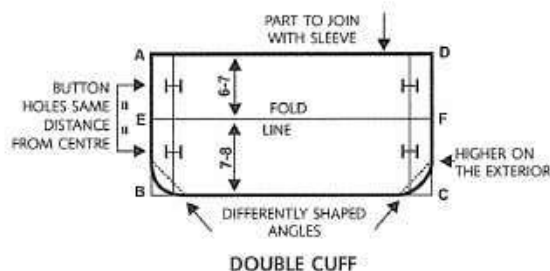
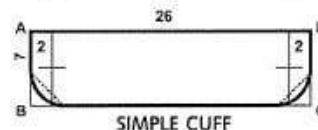
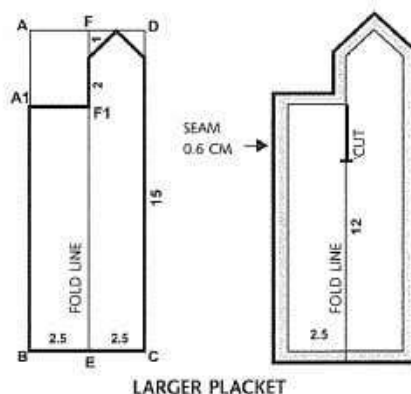
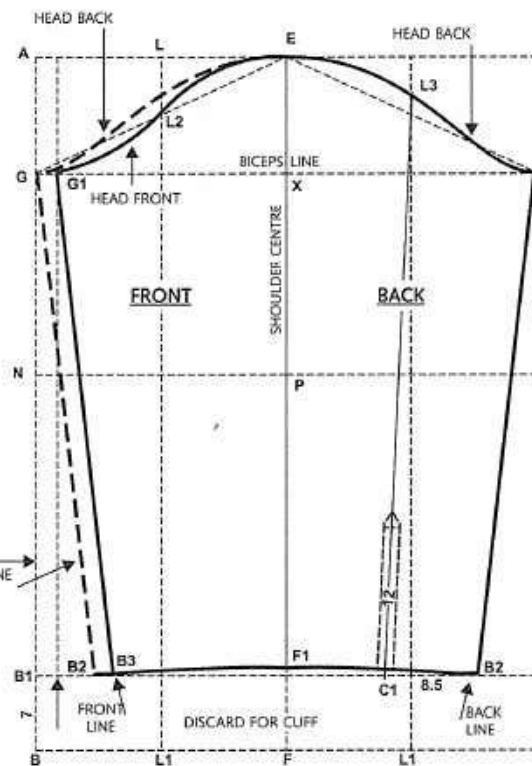
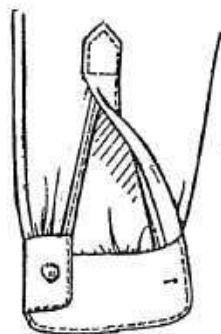
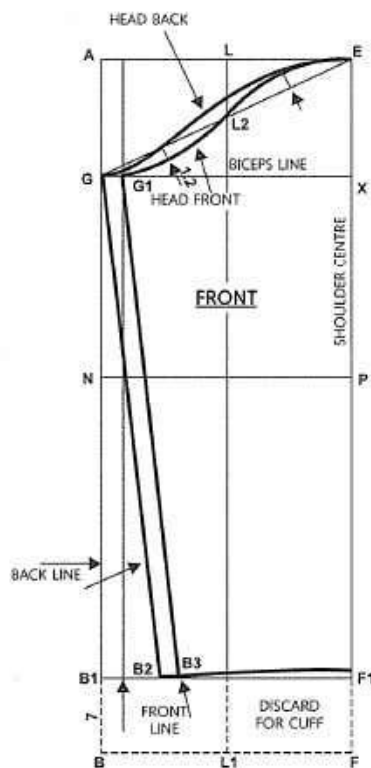
SHIRT WITH FRONT AND BACK YOKE



- Draw the basic pattern of the shirt.
- Draw the front and rear yoke line to the height and with desired shape, as shown in the figure.
- Copy the yoke and bodice pattern parts onto another sheet of paper, adding the reference marks and the straight of grain.



SHIRT SLEEVE



Sleeve

- Draw a rectangle A-B-E-F with:
- A-B Sleeve height + 3 for ease.
(e.g.: $60 + 3 = 63$).
- A-E like measurement for Bodice sector + $\frac{1}{2}$ same sector + 2 cm (e.g.: Sector $14 + 7 = 21 + 2 = 23$ cm).
- A-G like half J-Z of the front girth + 1 cm (11 cm).
- Draw G-X.
- Join G-E with diagonal.
- A-N = half A-B-2. Join N-P.
- A-L = half A-E. Draw L-L1.
- L2 = half G-E.
- G-G1 = 2 cm.
- Draw E-G with a curved line as shown in the figure (Back head).
- Draw E-G1 with a curved line as shown in the figure (Front head).
- Discard the cuff's measure to the bottom (e.g.: 7 cm).
- F1-B2 = 17 cm or as desired.
- F1-B3 = like F1-B2 less 2 cm (15 cm).

- Copy front and back sleeve and draw whole sleeve as in the figure.

- B2-C1 = 8.5 cm. Draw C1-L3 (Cut for the placket).

Simple cuff

- Draw a rectangle A-B-C-D with:
- A-B equal to the discarded cuff's height from the sleeve 7 cm.
- B-C equal to the wrist circumference + ease 2 cm + overlap for fastening 2 cm for part.
(e.g.: Wrist 20 + 2 = 22 + 4 = 26 cm).

Double cuff

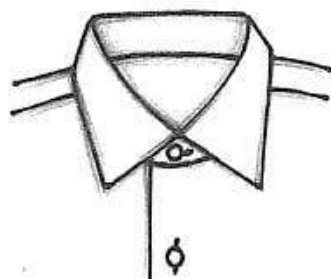
- Draw a rectangle A-B-C-D, with:
- A-B equal to the double cuff's height less 1 cm.
- B-C like a simple cuff.

Placket

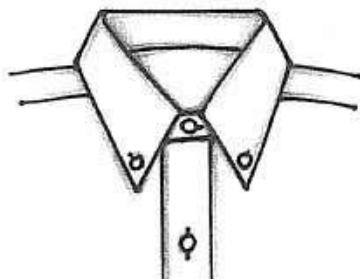
- Draw a rectangle A-B-C-D with:
- A-B equal to the placket's height + 3 cm (15 cm).
- B-C equal to the desired double of placket (2-2.5 cm).
- B-E half B-C. Draw E-F.
- B-A1 like sleeve's placket 12 cm. Draw A1-F1.

COLLARS

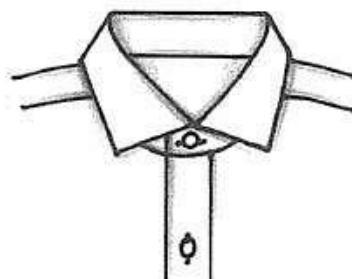
CLASSIC SHIRT COLLAR



CLASSIC COLLAR



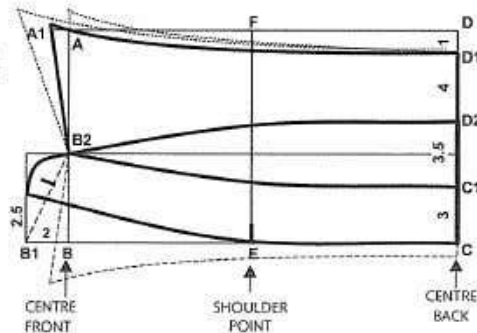
BUTTON-DOWN COLLAR



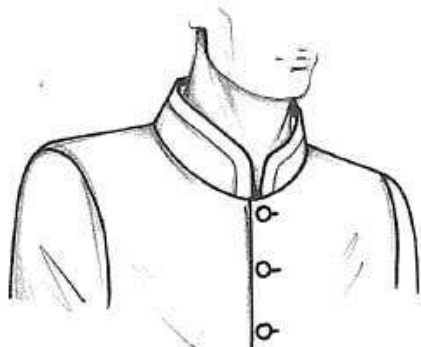
CLASSIC WINDSOR COLLAR



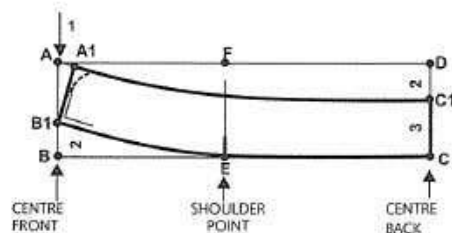
- Draw a rectangle A-B-C-D.
- A-B = Collar height + collar band + 4.5. (e.g.: 4 + 3 cm = 7 + 4.5 = 11.5 cm).
- B-C = $\frac{1}{2}$ neckline like bodice Front and Back (e.g.: 21.5 cm).
- C-C1 = 3 cm.
- C1-D2 = 3.5 cm.
- D2-D1 = 4 cm.
- B-B1 = 2-2.5 cm.
- B-B2 = 4.75 cm.
- A-A1 = 3 cm. or as desired.
- Draw the guideline B2 A1.
- C-E like neckline back bodice.
- Draw E-F.
- Connect the points as in the figure.



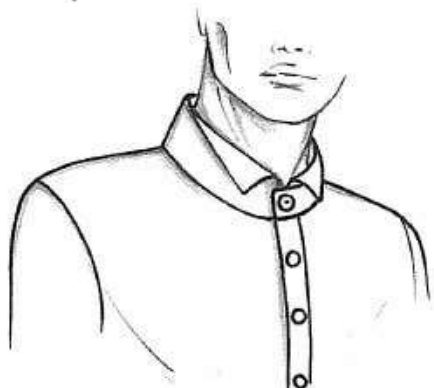
STAND-UP COLLAR



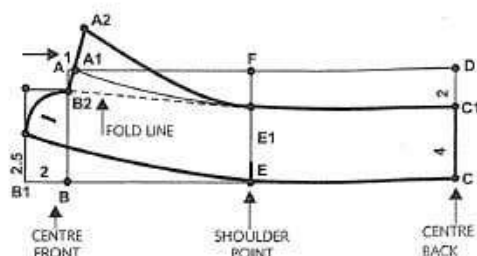
- Measure the neckline of the made base.
- Draw a rectangle A-B-C-D with:
- A-B equal to the height of the collar + 2 cm.
- B-C equal to $\frac{1}{2}$ front and back base neckline + 1 cm.
- B-B1 = 2 cm.
- D-C1 = 2 cm.
- C-E measure back neckline.
- C-C1 = Collar height.
- A-A1 = 1 cm.
- Join the points with shaped lines as shown in the figure.



TUXEDO SHIRT COLLAR

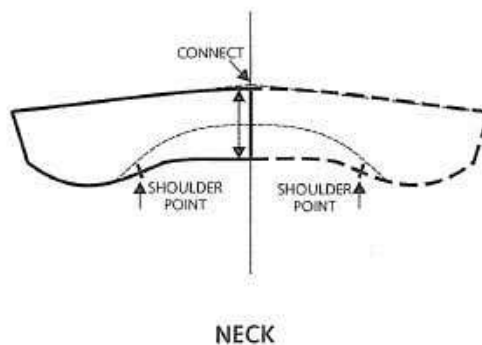
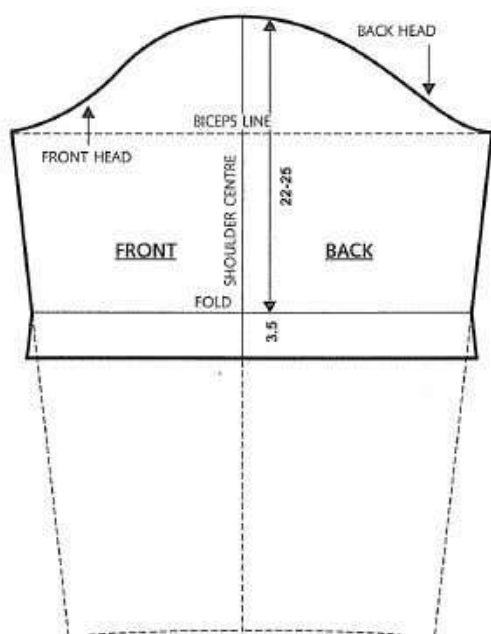
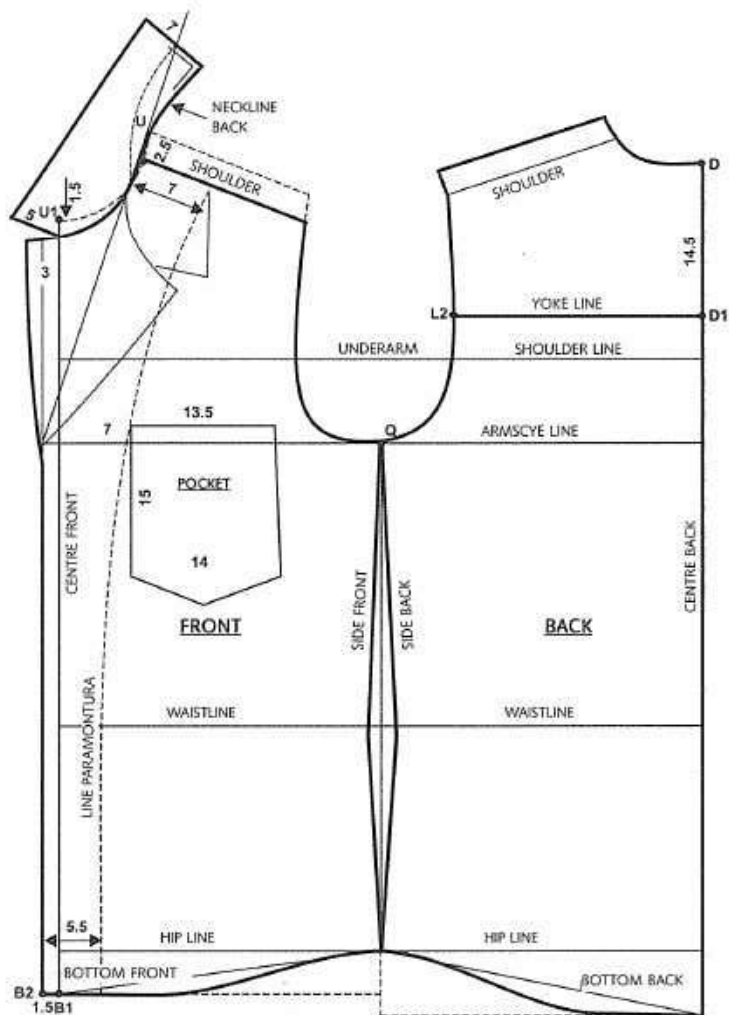


- Measure the neckline of the made base.
- Draw a rectangle A-B-C-D with:
- A-B equal to the height of the collar + 2 cm.
- B-C equal to $\frac{1}{2}$ front and back base neckline + 1 cm.
- B-B1 = 2-2.5 cm.
- B-B2 = 5 cm.
- D-C1 = 2 cm.
- C-E measure back neckline.
- C-C1 Collar height.
- A-A1 = 1 cm.
- B2-A2 = Fold height (3.5-4 cm).
- Join the points with shaped lines as shown in the figure.

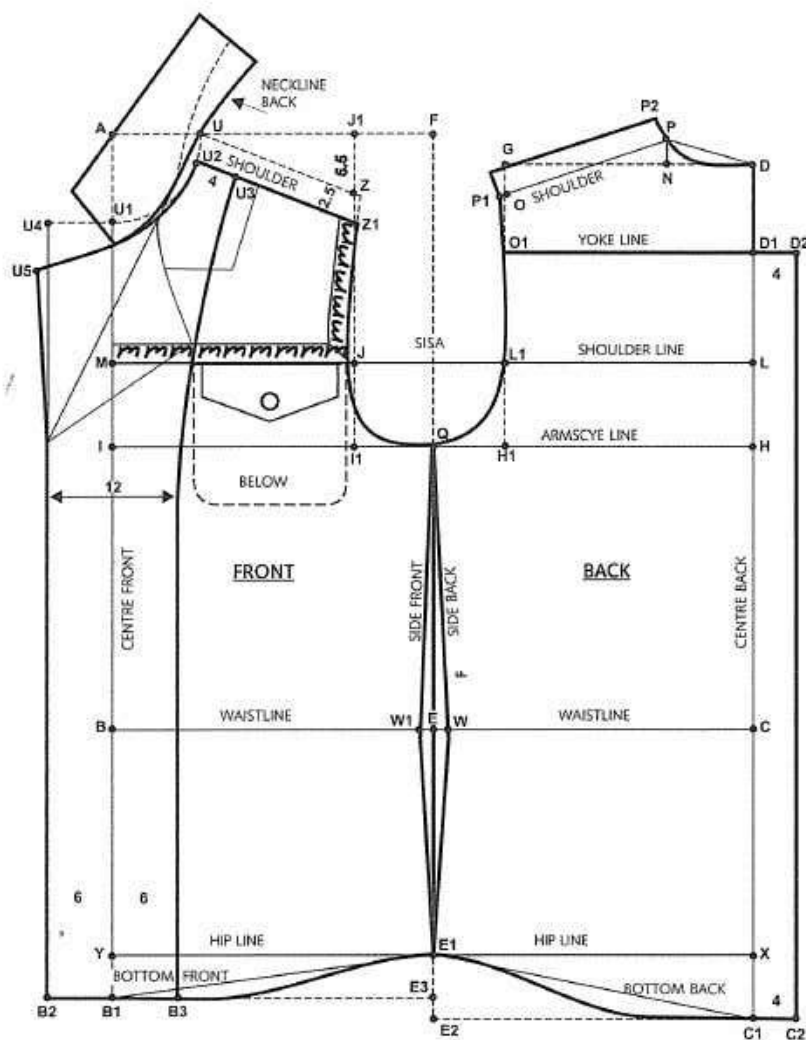


SHORT-SLEEVED SHIRT

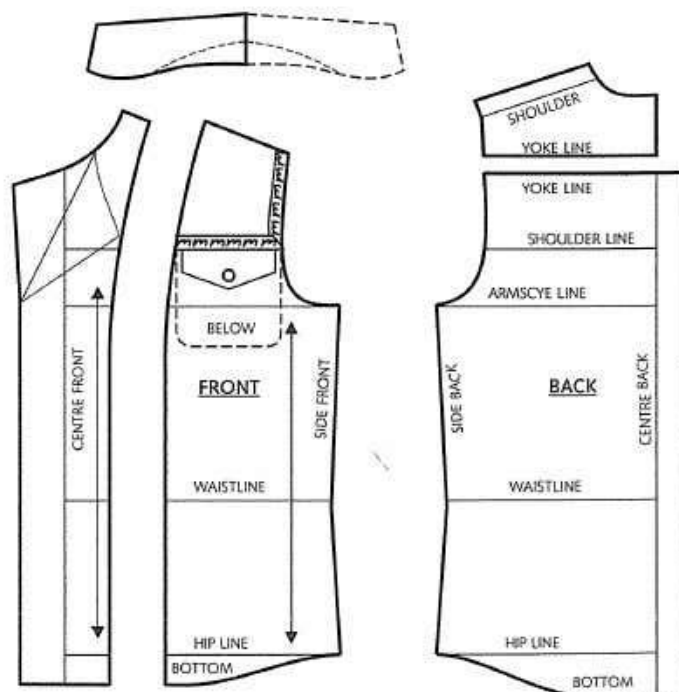
AND OPEN COLLAR



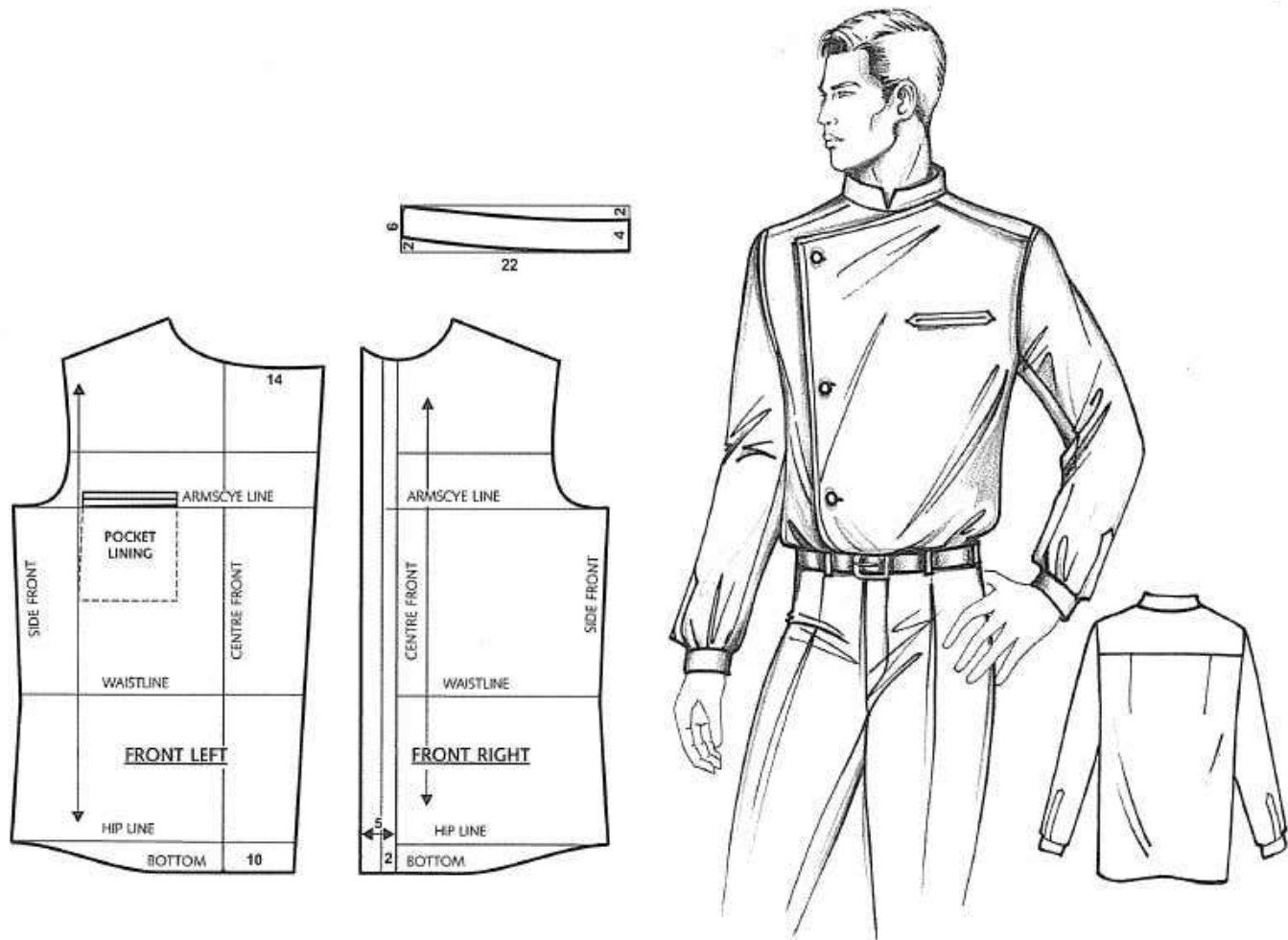
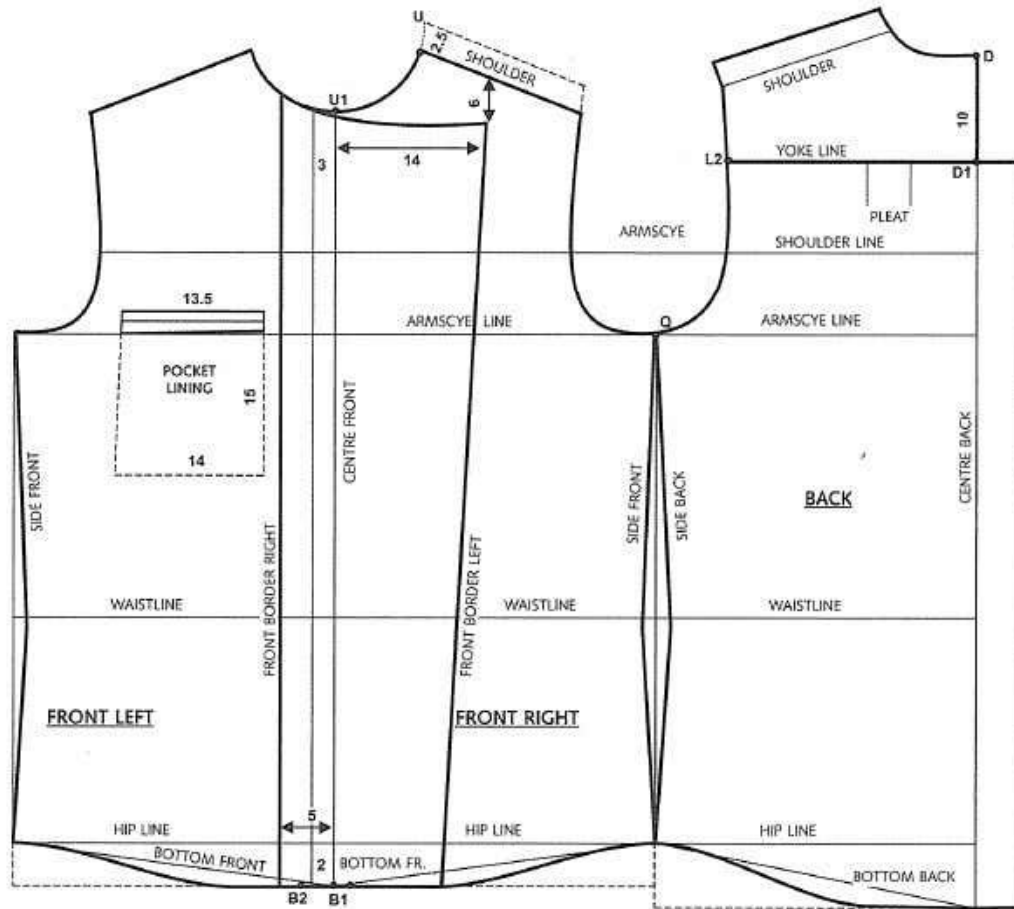
SHIRT WITH FRONT SEAM



- Draw the basic shirt pattern.
- Draw the front and rear yoke line O1-D1 to the desired height, as shown in the figure.
- Draw the extension of the centre back for the central fold D2-C2.
- Draw the extension of the centre front for the closure overlap U1-U4.
- Draw the neckline line U2-U5.
- Draw the front cut line U3-B3.
- Copy the yoke, seam and bodice pattern parts onto another sheet of paper, adding the reference marks and the straight of grain.



ASYMMETRICAL SHIRT



TROUSERS

Men's trousers have a different shape from women's, especially in the inseam area, for obvious structural reasons, as well as for reasons of style and aesthetics. However, jeans and sports pants are considered unisex.

The inseam level is a fundamental element in the construction of men's pants.

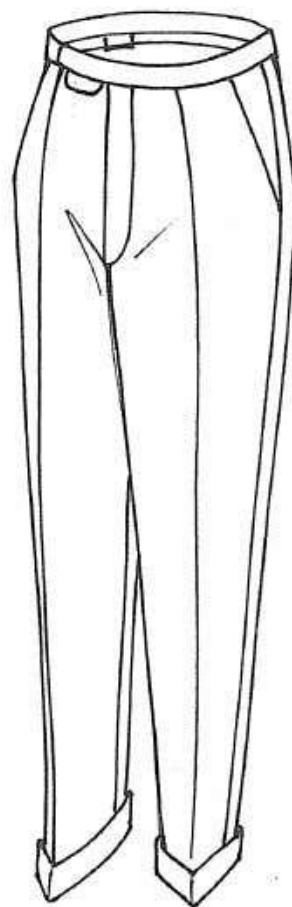
It must not be too high so as not to offend, nor too low so as not to interfere with movement, so therefore it is important to measure it carefully and establish it with precision.

But most of the time, to take this measurement precisely is not easy because there are various problems involved, due to the reserve of the tailor (all the more so, if she is a woman), and that of the customer, who may feel embarrassed, especially if he is not in a rapport of confidence.

To overcome this drawback and to achieve a basic shaping that works even for industrial clothes manufacturing, the differentiation of the inseam between left and right has been made on the basis of calculations and trials carried out on individuals with an average shape.

For subjects who have a different shape, it is necessary to make proper adjustments.

Men's pants styles are usually more classic and less showy than female ones: in terms of line, colour, and fabric, but they are technically more complex and almost always lined and reinforced with panels.



CLASSIC TROUSERS WITH TURN-UPS

MOST WIDELY USED MEN'S TROUSER STYLES



CLASSIC TROUSERS



TROUSERS WITH TURN-UPS



TROUSER JEANS



JODHPUR PANTS



SHORT TROUSERS



TRACKSUIT BOTTOMS

BASIC MEN'S TROUSER BLOCK



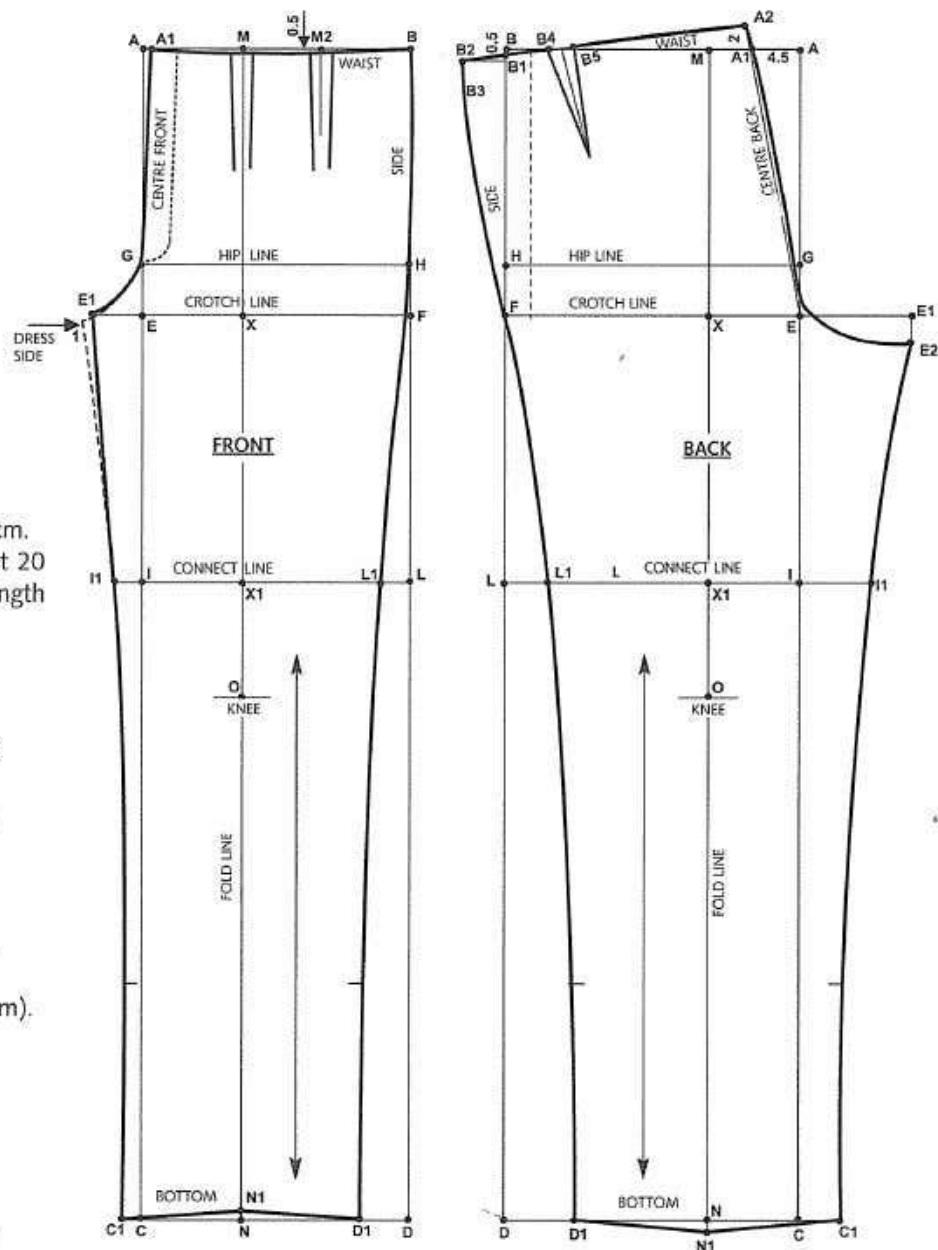
Measurements: Hips circumf. 100 cm.
- Waist circumf. 84 cm. - Hip height 20
cm. - Body rise 24 cm. - Trousers length
105 cm.

Front

- Draw a rectangle A-B-C-D, with A-B equal to $\frac{1}{4}$ Hips circumf. (e.g.: 100: 4 = 25 cm) and A-C equal to the total trousers length (e.g.: 105 cm).*
- A-E Body rise measure (24 cm).
- B-F like A-E. Draw E-F.
- A-G Hip height measure (20 cm).
- Draw G-H (HIP).
- E-E1 = $\frac{1}{5}$ of E-F (e.g.: 25: 5 = 5 cm).
- E-I like A-E.
- Draw I-L.
- Point X = half of E1-F.
- Draw M-N intersecting at point X and write FOLD LINE and STRAIGHT GRAIN.
- M-O = Knee height (e.g.: 60 cm).
- M-M2 = 6 cm.
- Draw the dart or the pleat with necessary width and depth.
- X1-L1 = 12.5 cm.
- X1-I1 like X1-L1 (THIGH).
- N-N1 = 1.5 cm.
- N-C1 = 11 cm (as desired).
- N-D1 like N-C1.
- Draw C1-N1-D1. - (BOTTOM).
- Draw E1-G-A1 with a curved line.
- Draw E1-I1-C1 accordingly.
- Draw B-A1 accordingly and write WAIST.
- Draw B-H-L1-D1 accordingly.

[Back](#)

- Draw a rectangle A-B-C-D, with:
- A-B equal to $\frac{1}{4}$ Hips circumf. + 2
(e.g.: $100 : 4 = 25 + 2 = 27$ cm).



- A-C equal to the total trousers length (e.g.: 105 cm).
- A-E Body rise measure (24 cm).
- B-F like A-E. Draw E-F.
- A-G Hip height measure (20 cm).
- Draw G-H (HIP).
- E-E1 = $\frac{1}{3}$ di E-F + 1.5 cm (e.g.: $27 : 3 = 9 + 1.5 = 10.5$ cm).
- E1-E2 = 2 cm.
- E-I like A-E.
- Draw I-L.
- Point X = half of E1-F.
- Draw M-N intersecting at point X and write FOLD LINE.
- M-O = Knee height (e.g.: 60 cm).
- A-A1 = 4.5 cm.
- A1-A2 = 2-3.5 cm.
- B-B1 = 0.5 cm.
- Draw A2-B3 passing through B1, with measure equal to A-B (WAIST).
- B3-B4 = $\frac{1}{3}$ di A2-B3 (9 cm).
- Dart with necessary width and depth.
- X1-L1 = 14 cm.
- X1-I1 like X1-L1 (THIGH).
- N-C = 12 cm.
- N-D = 12 cm.
- N-N1 = 1.5 cm.
- Draw C-N1-D (BOTTOM).
- Draw E2-E-A2 (CENTRE BACK).
- Draw E2-I1-C1 (INSEAM).
- Draw B3-F-L1-D (SIDE).

ALTERATION OF THE FRONT

DRESSING "LEFT" OR "RIGHT"

The *side one* dresses on refers to the extra material provided to a part of the front of men's trousers to accommodate the male anatomy.

The amount varies, depending on the fullness of the trouser inseam.

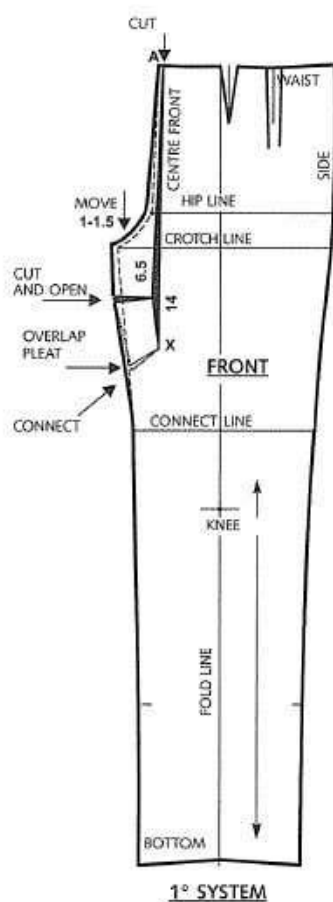
In fact, if the trousers are tight, greater ease is required, as the back obliges the front to follow the body's contours and to highlight the differences in shape.

If the inseam is wide, instead, a minimal difference may be

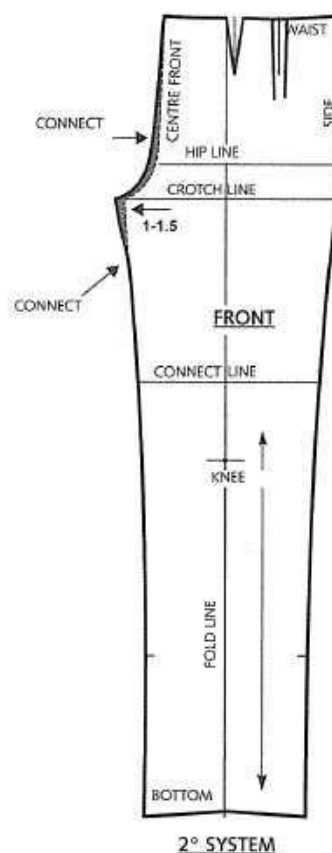
sufficient, and in some cases, may not even be necessary, especially in an industrial manufacturing context.

In tight-fitting trousers and those made to measure with a tight inseam, dressing left or right requires an ease ranging from 1–1.5 cm.

This measurement is not a proportional entity, nor can it be specified, also due to the obvious fact that the age and the virility of the person contributes to the effect.



1° SYSTEM



2° SYSTEM

THE TECHNIQUE OF THE DRESSING SIDE

There are several ways to carry out this modification on the basic pattern. There are two methods that are most commonly used:

The first system is the more common, and, as shown in the figure, three slashes are made in the pattern: one vertical slash parallel to the centre front; one horizontal slash at 6.5 cm from the inseam, and one slash at 14 cm from the inseam.

Cut along these lines and create fullness pivoting the two pat-

tern pieces on the fulcra A and X until reaching the desired measurement. Then redraw a smooth outline of the pattern. Second system

This system is much simpler, though not as precise as the one above. It can be achieved by broadening the parallel area between the centre front and the inseam, thus acquiring the centimetres needed for the dress side. Then join the lines under the leg. Or you can apply the increase by drawing the area freehand or with the help of a French curve.

APPLICATION OF THE CENTRE CREASE LINE

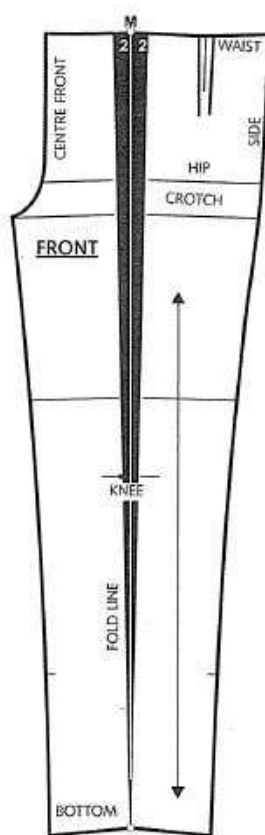
INTRODUCTION

The function of the centre crease of the trouser front is not only aesthetic, but may become a means for improving the wearing comfort. In fact, the centre fold justifies greater ease at the knee thanks to the room created down the front of the leg.

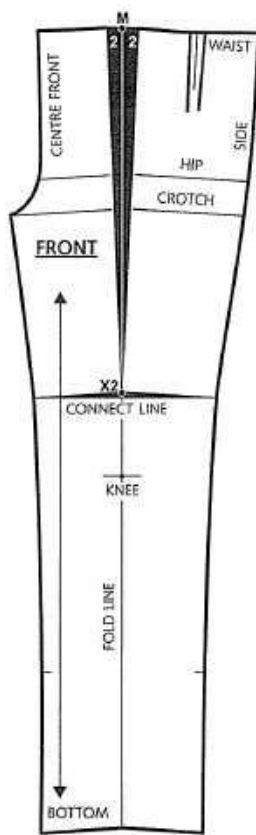
There are three procedures for making the crease, the first of which is the most common and best corresponds to the values

illustrated; the second is designed to maintain the fullness at the knee, and the third is recommended for big men's trousers, as it helps to keep the front in balance.

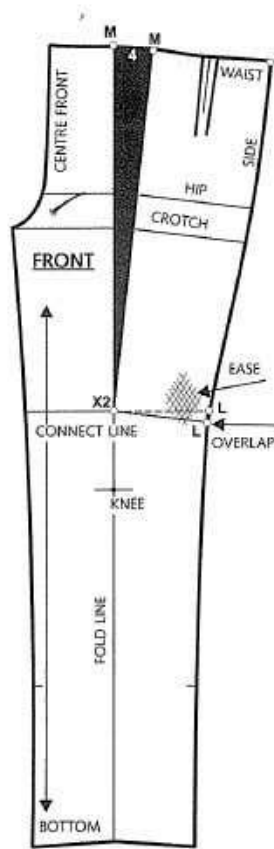
For this crease we cannot speak of proportions, but it is important that it be closed and well-composed, even if it may be advisable to minimize it for a portly subject and accentuate it for a small-waisted subject.



1st PROCEDURE



2nd PROCEDURE



3rd PROCEDURE

EXECUTION TECHNIQUE

First procedure

- Draw the front of the trousers with desired measures and ease.
- Slash along the M-N fold line.
- Open 2 cm on one side and 2 cm on the other.

Second procedure

- Draw the front of the trousers.
- Slash along the fold line to the point X2.
- Open 2 cm on one side and 2 cm on the other.

Third procedure

- Draw the front of the trousers.
- Slash along the fold line to the point X2.
- Slash along the L-X2 line.
- Pivot the M-D-L part of the pattern 4 cm with X2 as the fulcrum, overlapping it on point L.
- During the assembly, use an iron to ease the outer part of the side at knee-level.

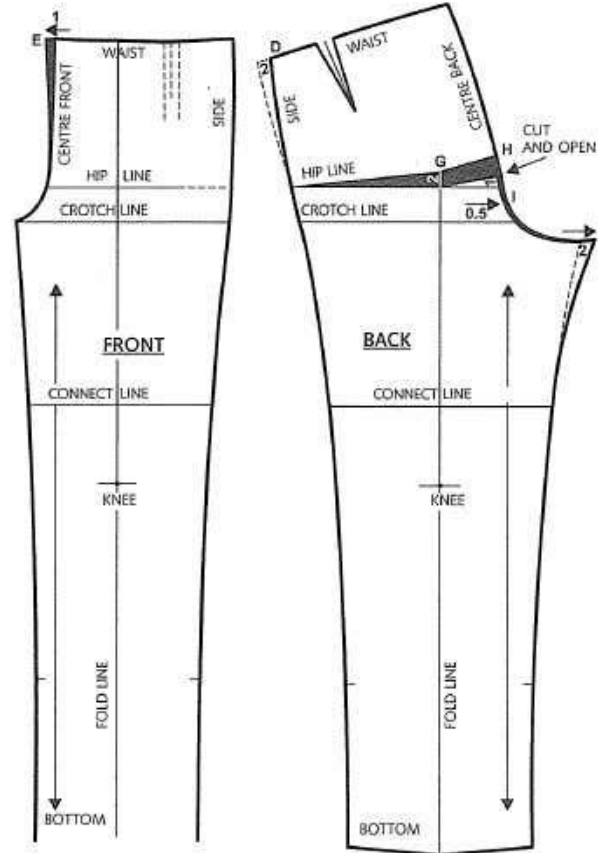
CORRECTION OF DEFECTS

FORWARD PELVIC TILT



This conformation is quite difficult to work with as it initially arises due to the stiffening or backward movement of the leg from the ankle on up, so that the pelvis is forced to tip forward to reestablish equilibrium.

- Point E increase by 1 cm.
- Point G opening 2 cm.
- Point H consequent opening.
- Point I increase by 0.5 cm.
- Point D reduce by 2 cm.
- Inseam - increase by 2 cm.

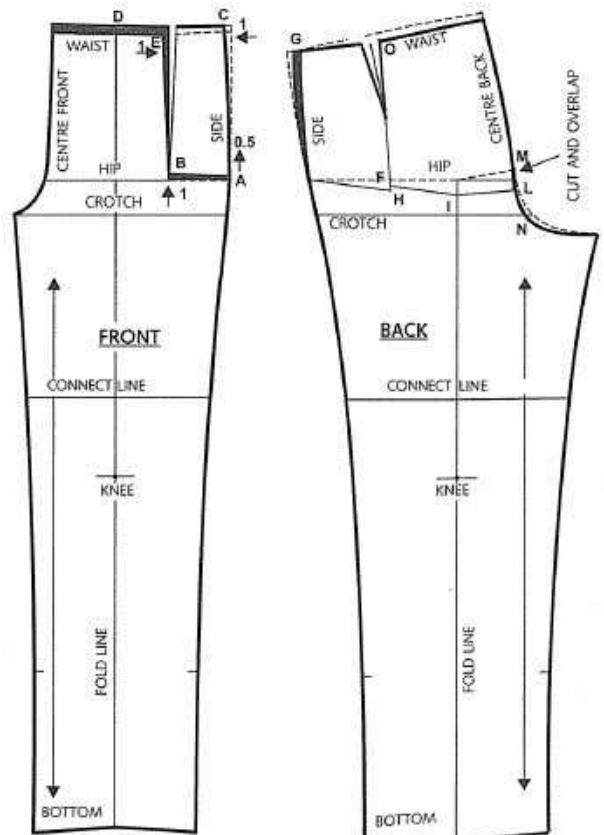


BACK PELVIC TILT



This conformation is typical of the overweight who, to offset their weight assume a forward position with their hips.

- Point A extend 0.5 cm.
- Point B extend 1 cm.
- Point C discard 1 cm.
- Point D extend 1 cm.
- Point E increase 1 cm.
- Point F overlap 2 cm.
- Point G increase 1 cm.
- Point H overlap 1.5 cm.
- Point I overlap 2 cm.
- Point L overlap.
- Point N reduce by 0.5 cm.
- Point O lower 0.5 cm.



NARROW HIPS AND PROTRUDING BOTTOM



- Narrow hips 1 cm.
- Protruding bottom 2 cm.

- Point A increase by 1 cm.
- Point B decrease by 1 cm.
- Point C decrease by 2 cm.
- Point D increase by 2 cm.
- Point E consequent shifts.
- Point F extend 0.5 cm.
- Increase the tip of the inseam by 2 cm.

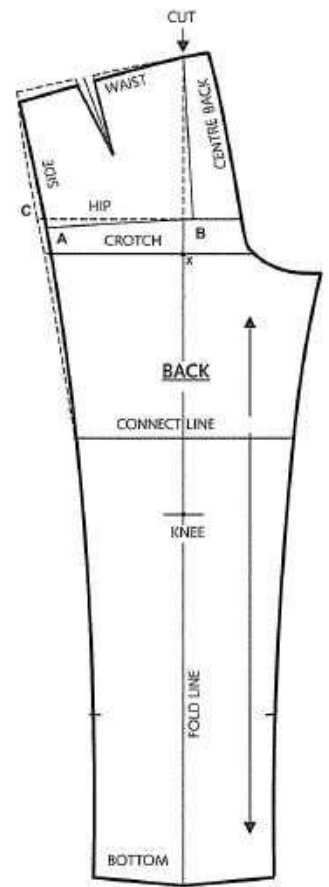
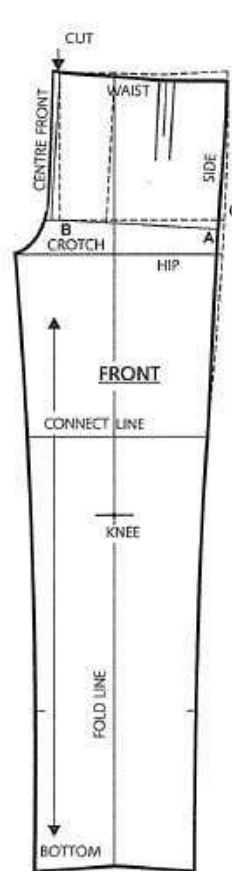
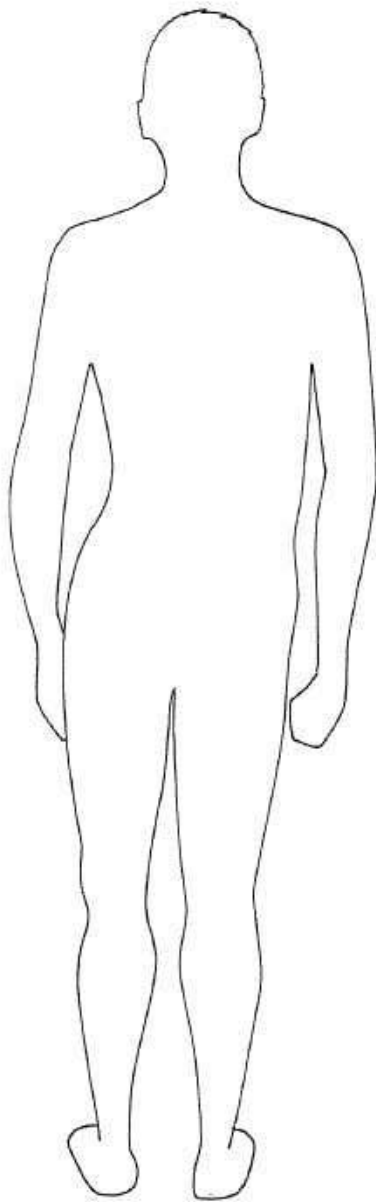


- Wide hips 1 cm.
- Flat bottom 2 cm.

- Point A decrease 1 cm.
- Point B increase 1 cm.
- Point C increase 2 cm.
- Point D increase 1 cm.
- Point E overlap 2 cm.
- Point F overlap.
- Point G drop 0.5 cm.



ASYMMETRICAL HIPS



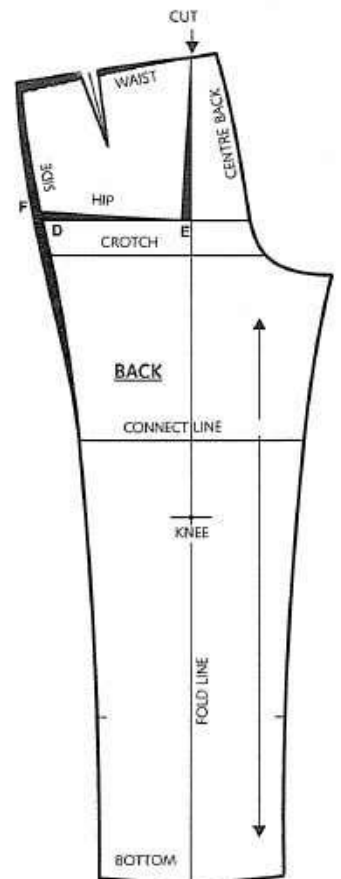
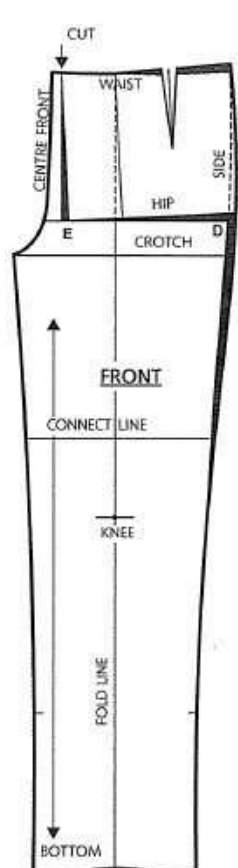
Uneven hips show one side higher and the other side lower in equal measure, so that you must lower the top on the low side and raise it on the high side.

Low side

- Point A overlaps 1 cm above point C.
- Point B overlap.

High side

- Point D opening of 1 cm.
- Point E consequent opening.

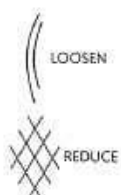
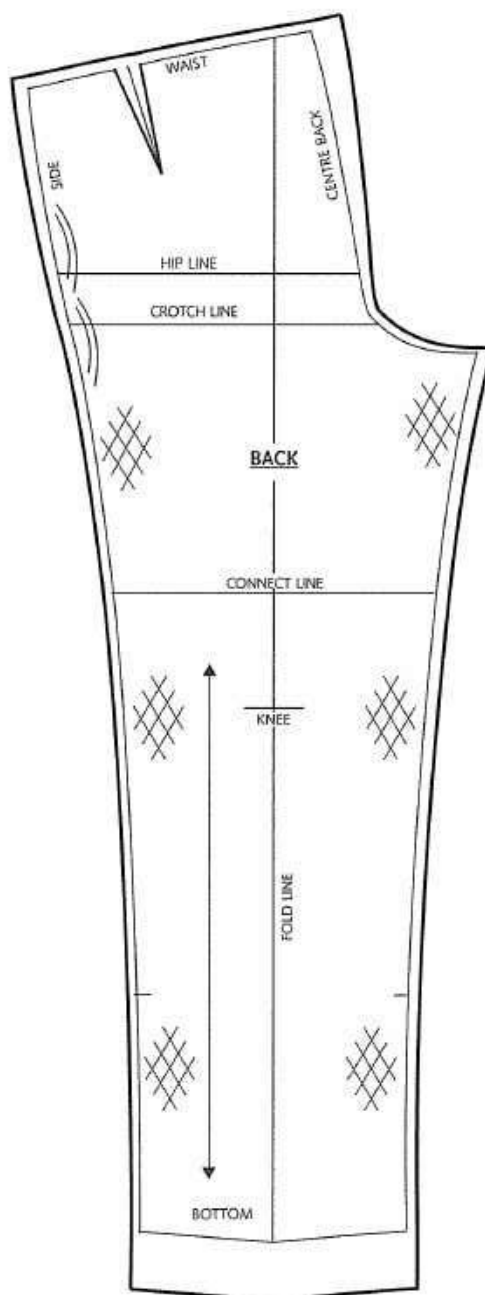
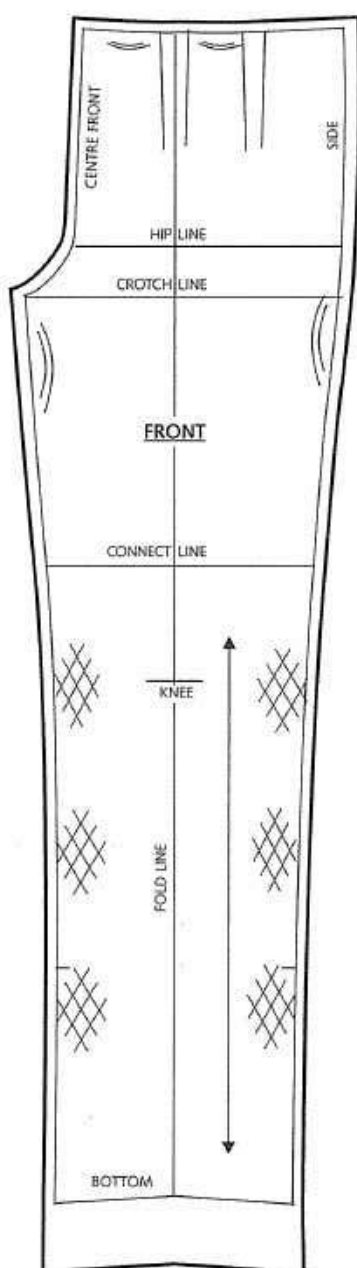


SEAM ALLOWANCES

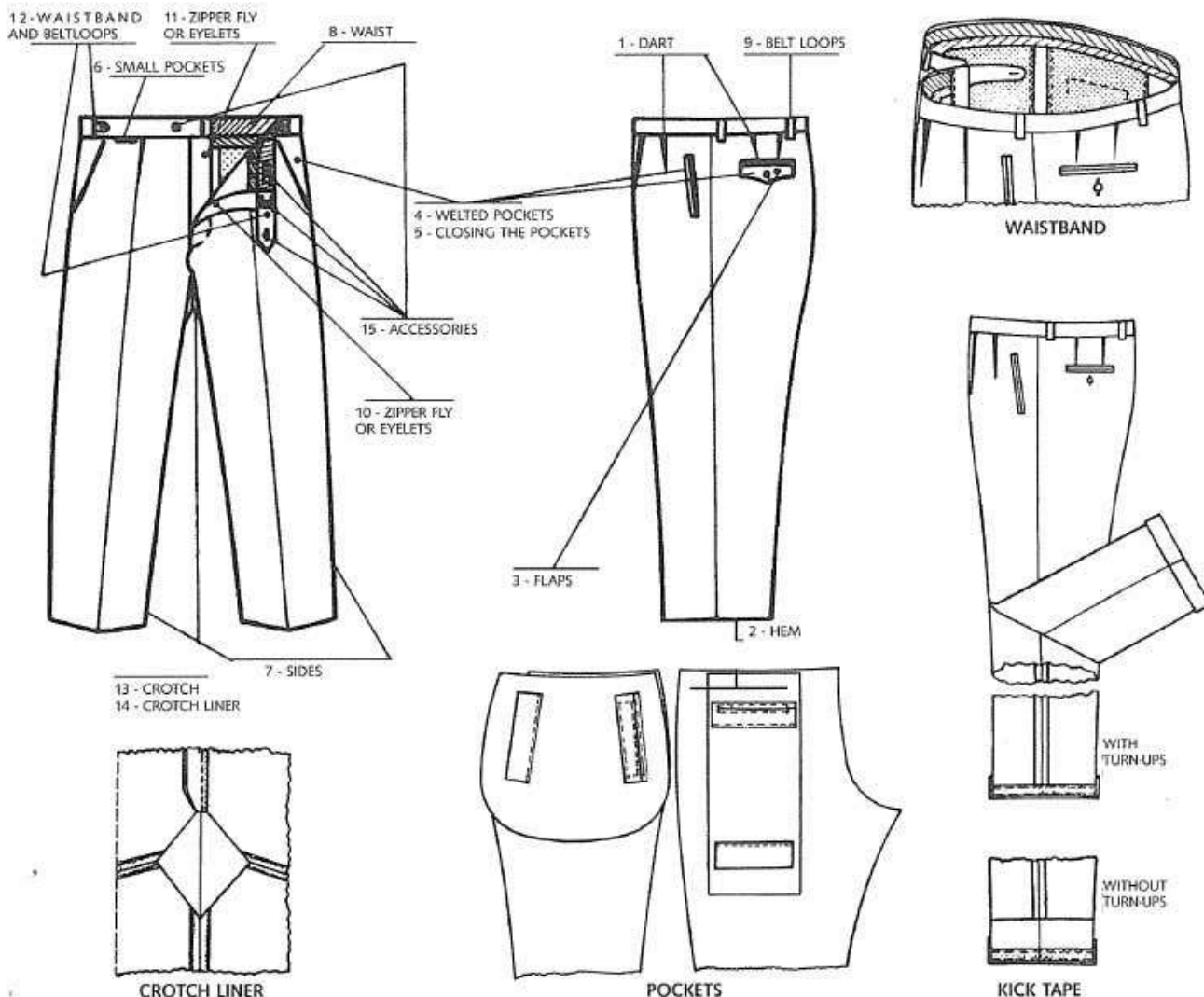
AND MARKINGS FOR PRESSING



This graphic shows the indications concerning the use of the pressing iron for giving the right shape to the fabric.
The seam allowances have various widths depending on their position, and must remain parallel to the pattern lines.



WORK PLAN



1) Darts: - Sew open darts on the front parts - Sew closed darts on the front parts - Sew darts on the back parts - press off.

2) Hem: - Overcast the bottom edges of the parts - Apply the kick tape to the back parts or all round with two rows of stitching, with the side seams already done. Cuffed trousers, hem enclosed in the kick tape. - Sew bottom hemlines using invisible stitch. - Baste the cuffs - Tack down the cuffs.

3) Flaps: - Application of the lining to the pocket flap - Turn flaps out - Press off the flaps - Overcast stitching on the edge of the pocket facing - Application of facing to the pocket lining - Turn out - Press off edging - Prior application of the button to the pocket flap, avoiding the lining.

4) Welled pockets: - Sew the pockets with two edges - Sew pockets with two edges and insertion of flaps - Cut at the four corners - Turn edges out - Sew welting - Sew front pocket welting - Sew front pocket edging - Sew front pocket - Sew ends of front pocket welting on facing - Fasten front pockets.

5) Closing the pockets: - Fasten the pocket edging - Sew the outline extension - Close the pockets - Turn pockets out - Close pockets with reinforced stitching - Sew flaps to pocket welting.

6) Small pocket: - Sew lining on facing - Sew lining on rear pocket trouser side - Cut size of small pocket - Close small pocket lining - Turn out.

7) Hips: - Join the sides and close the lens - Press off - Open seams.

8) Waist: - Preparation of bias tapes for linings and reinforcements - Creasing of bias tapes - Sewing with rigid tongue for invisible fastening - Application of the prefabricated ribbon to the waistband - Join the waistband to the trousers - Open - Press off waistline stitching - Anchoring the pocket linings to the waistband - Invisible stitching - Waistband reinforcement.

9) Belt loops: - Sew the loops - Turn out - Press off - Stitch belt loops to waistband - Bar seams.

10) Zipper fly or eyelets: - Join the lining to the fabric loops - Install the zipper or eyelets on the fly - apply the

second lining to the fly - Fly bar seams - Fly reinforcement stitching.

11) Zipper or button fly: - Overcast stitching on the facing and the area corresponding to the rear trouser pocket - Join the lining to facing - Apply facing to the trousers - Install zipper or buttons - Close waistband ending - Turn out lining, fly and waist tab.

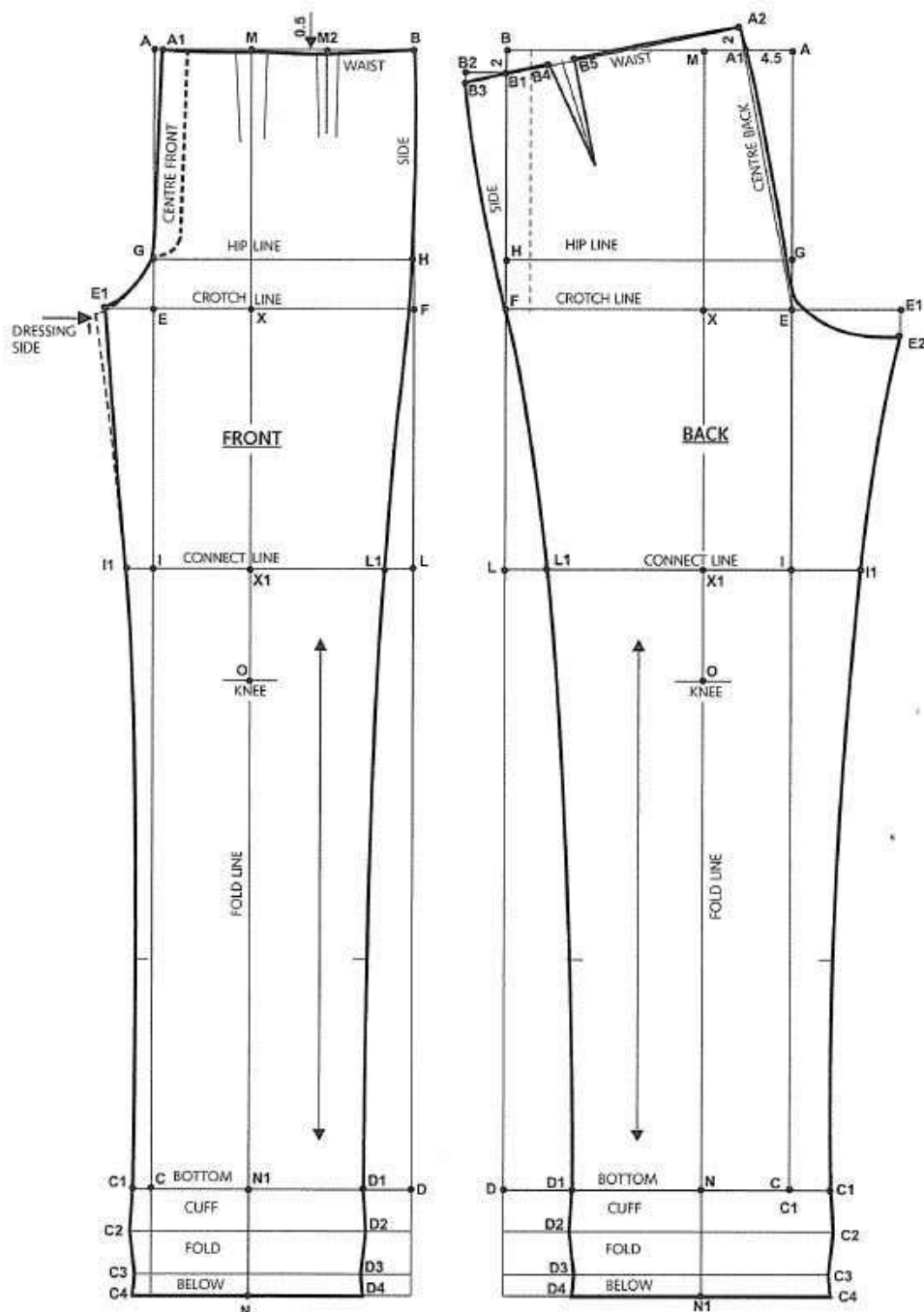
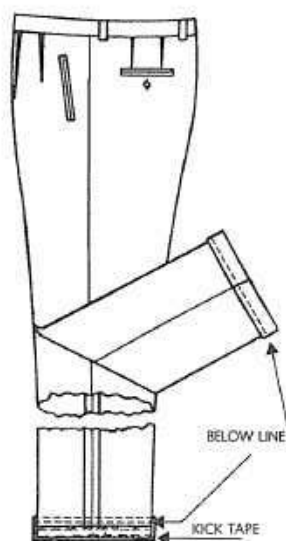
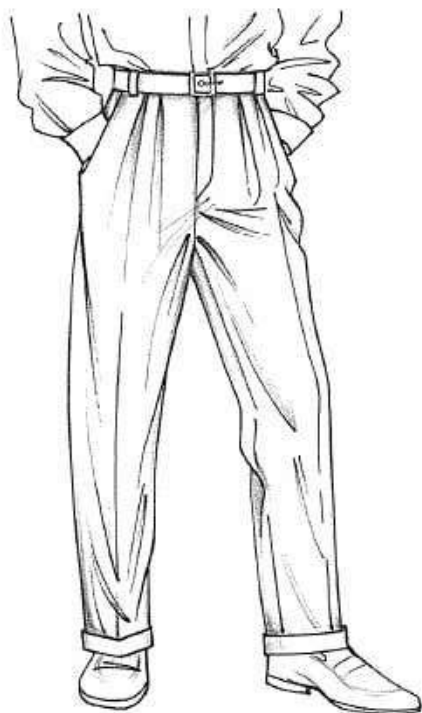
12) Waistband point and adjustable waistband tabs: - Join pieces of adjustable waistband tabs - Sew waistband point seam - Turn out waistband tabs and waistband point - Sew elastic and adjustable waistband tabs.

13) Crotch: - Overcast stitch the back section in the inseam area - edge back sections in the inseam area - Sew the seam - Press seams open - Close fly at the start of the crotch.

14) Crotch liner: - Overcast stitch the crotch patches - Fold - Press crotch liner triangles - Join at seam - Attach crotch liner - Finish.

15) Accessories: - Make eyelets - Sew on buttons - Sew on labels - Attach hook and bar set to waistband.

CUFFED TROUSERS



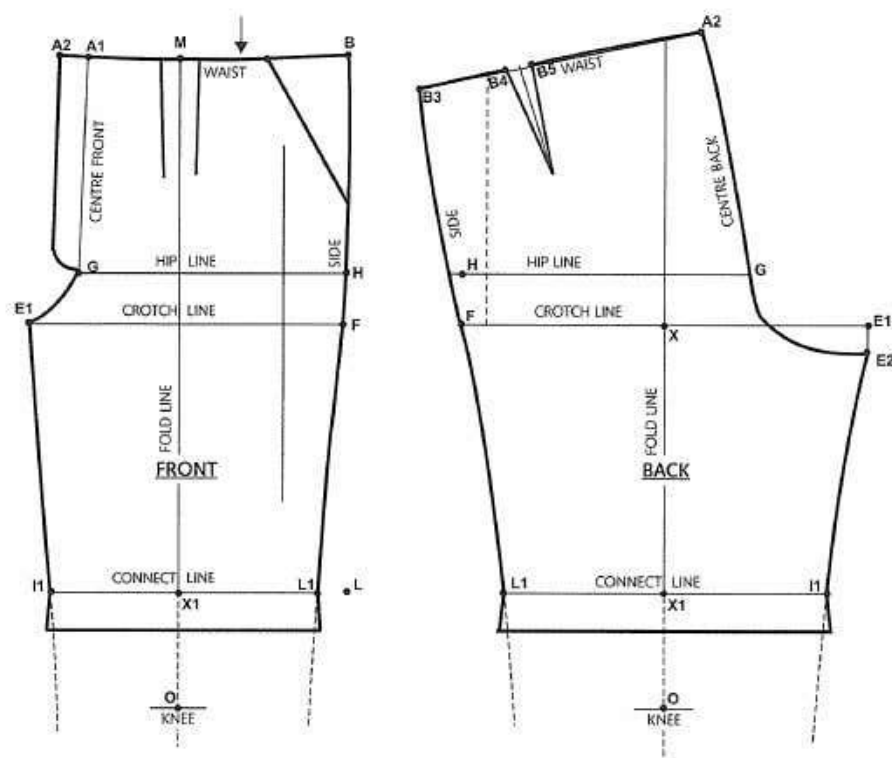
Trouser cuffs are obtained by lengthening the front and the back by 3–5 cm, depending on the style.

Verify the trouser length before adding the cuff, using as a guide the finalized basic pattern block.

- Draw the trouser base with or without darts.
- C1-C2 desired height of finished turn-ups (4 cm).
- Draw C2-D2.

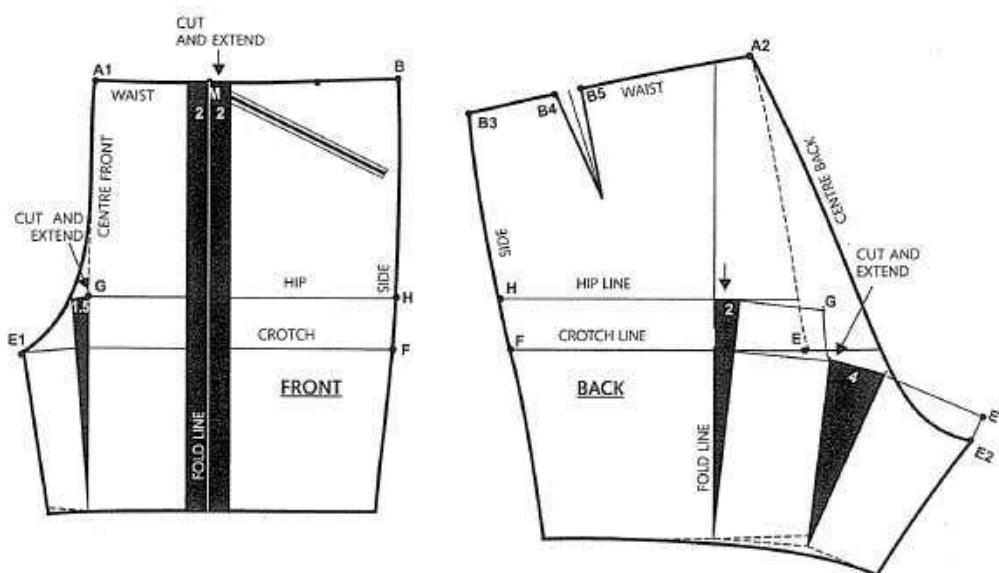
- C2-C3 fold line, same distance as C-C2.
- Draw C3-D3.
- C3-C4 below part, $\frac{1}{2}$ C2-C3.
- Draw C4-D4.
- Join the drawn points C1-C2-C3-C4 and the points D1-D2-D3-D4 with lines slanting the opposite way with respect to the previous ones, so they lie perfectly flat when folded.

SHORT PANTS



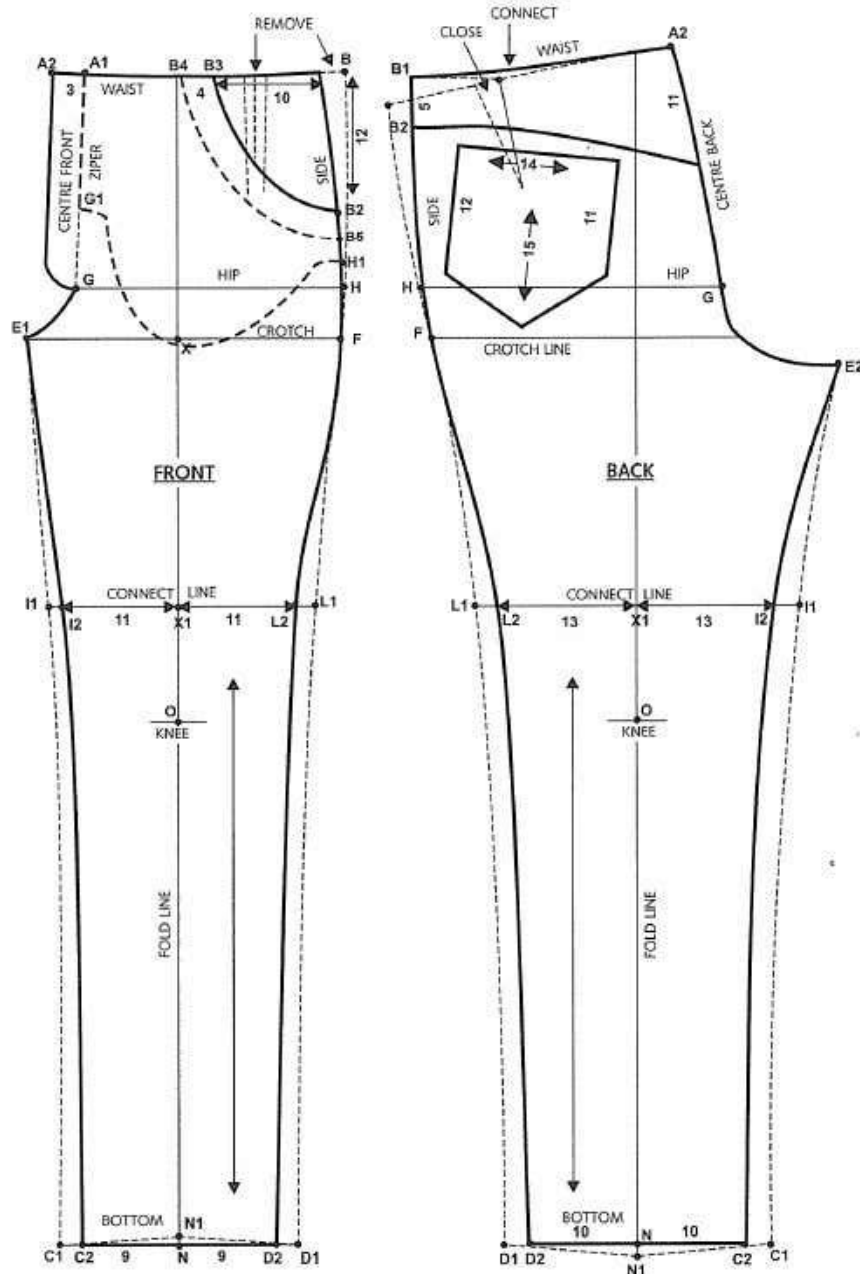
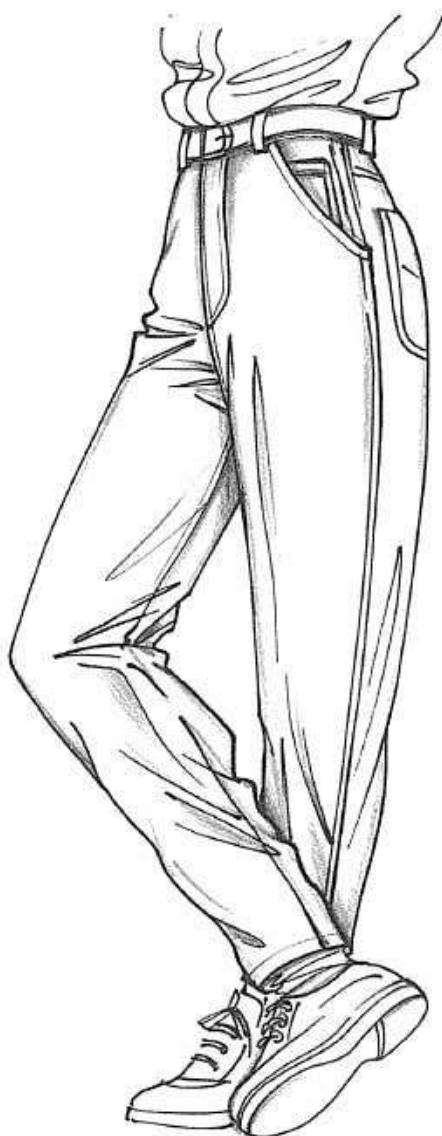
- Draw the basic pants block with appropriate measurements and ease.
- Make the desired length.
- Draw the extension for the pleat.

FULLER SHORT PANTS

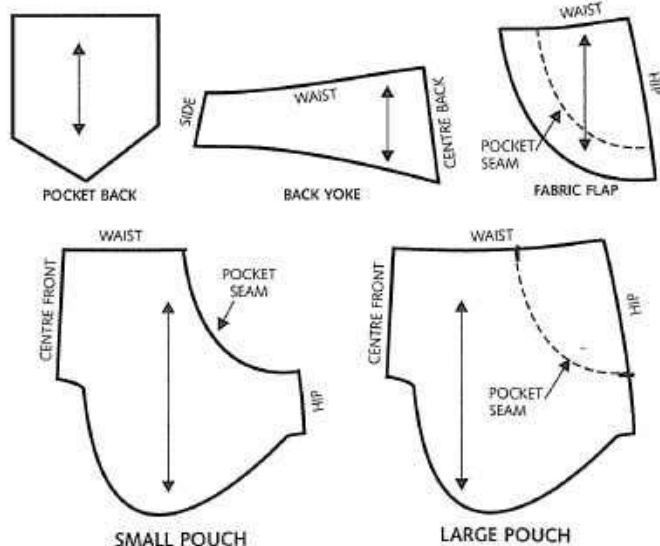


If a more comfortable fit for the short pants is desired, especially in the inseam area, modify as shown in the chart.

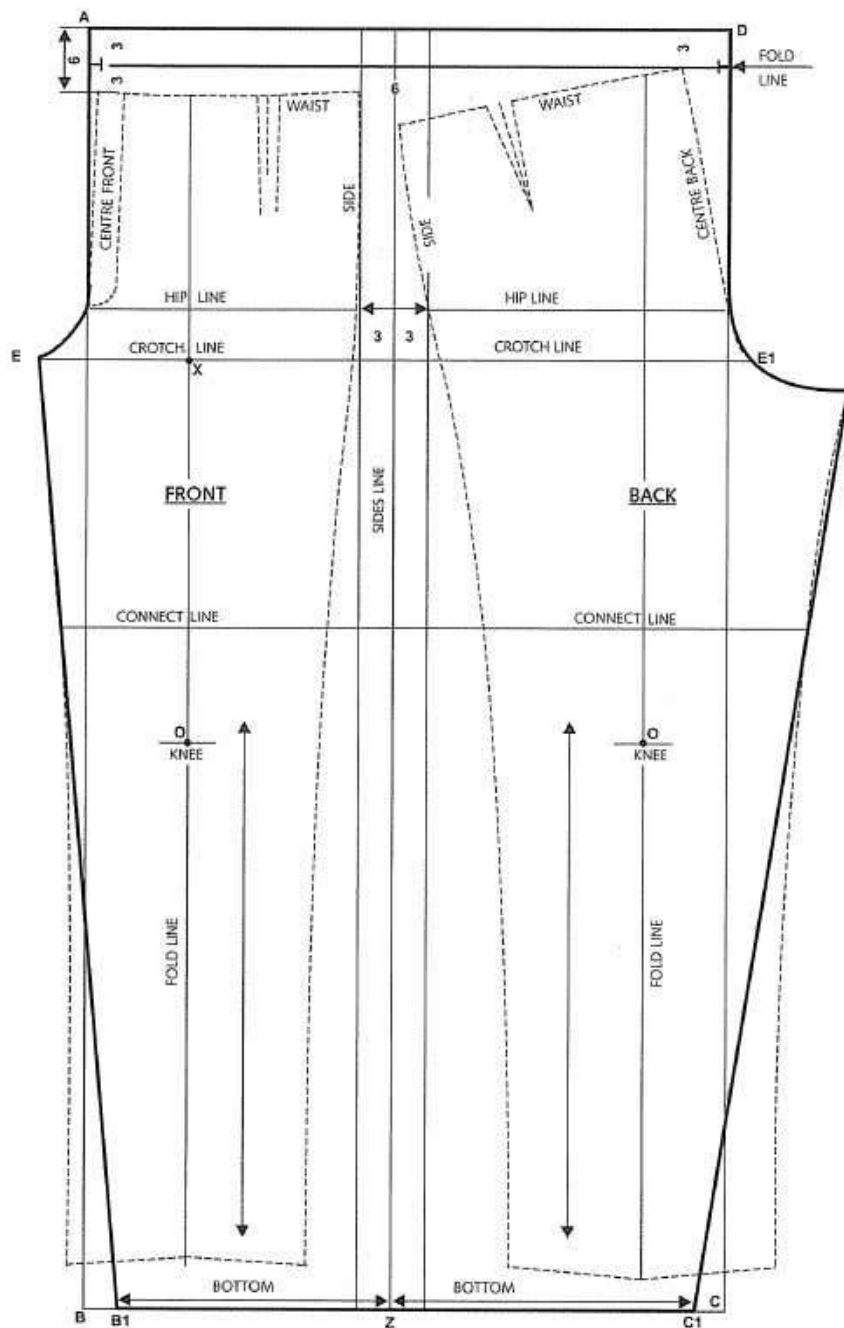
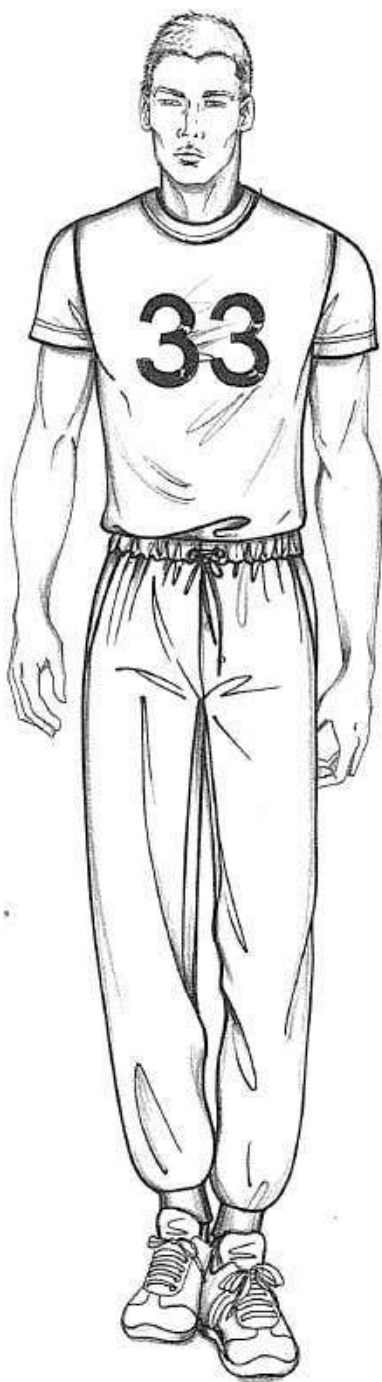
BASE JEANS



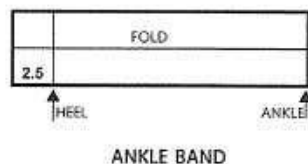
- Draw the trouser base.
- Eliminate the darts and the side's lines.
- Bring in from the points I1 and L1 back and front by 1.5-2 cm.
- Draw the points C2 and D2 as desired measure. (The back is always wider by 2 cm).
- Connect the points E1-I2-C2 and F-L2-D2 of the front.
- Connect the points E2-I2-D2 and F-L2-C2 of the back.
- Draw the back yoke A2-A3-B2-B1 to desired measure.
- Draw the back pocket with desired shape and measure.
- Draw the front pocket B2-B3 with desired shape and measure.
- Draw the flap B4-B5 about 4 cm from the pocket's border.
- Draw the large pouch pocket A1-G1-X-H1-B1 over which the fabric flap is sewn.
- Copy the small pouch pocket (which is sewn at the pocket's border.) A1-G1-X-H1-B5-B4.



BASIC PANTS BLOCK FOR JOGGERS

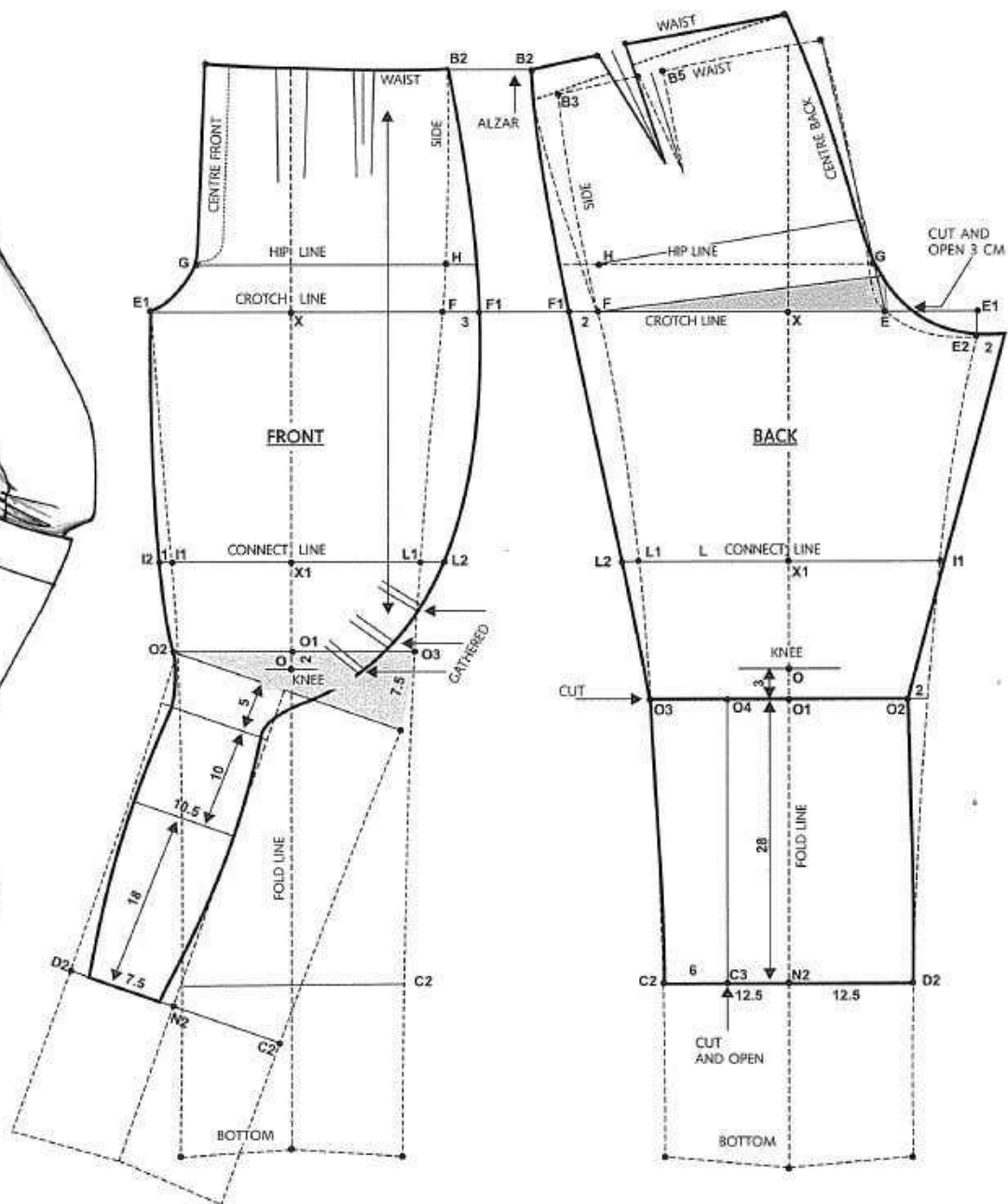


- Draw a rectangle A-B-C-D, with A-B measuring trouser length + 6 cm and with A-D circumference hip + 6 cm.
- A-V = half A-D. Draw V-Z.
- Position the pants block on this rectangle, following the crotch guideline, keeping the side seams 3 cm per side from the V-Z line and the back waistline 3-3.5 cm from the A-D line.
- Extend the front and back centre lines to the A-D line.
- Z-B1 = measure front bottom + 3 cm.
- Z-C1 = measure back bottom + 3 cm, for extension.
- Join E-B1 and E1-C1.



Note: The pattern can be laid out whole or separating the front and the back, should a side seam be needed for a zipper or other.

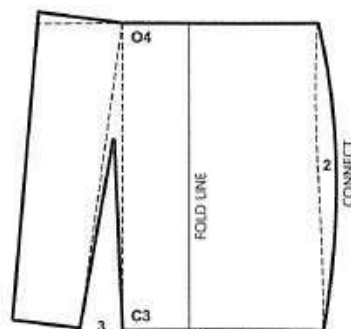
A black and white line drawing of a woman's lower body. She is wearing high-waisted trousers with a wide belt and a buckle. The trousers have a pleated front and a small pocket on the right side. She is also wearing tall, pointed-toe boots with a strap across the mid-calf. The drawing is done in a simple, sketchy style with some shading to indicate form.



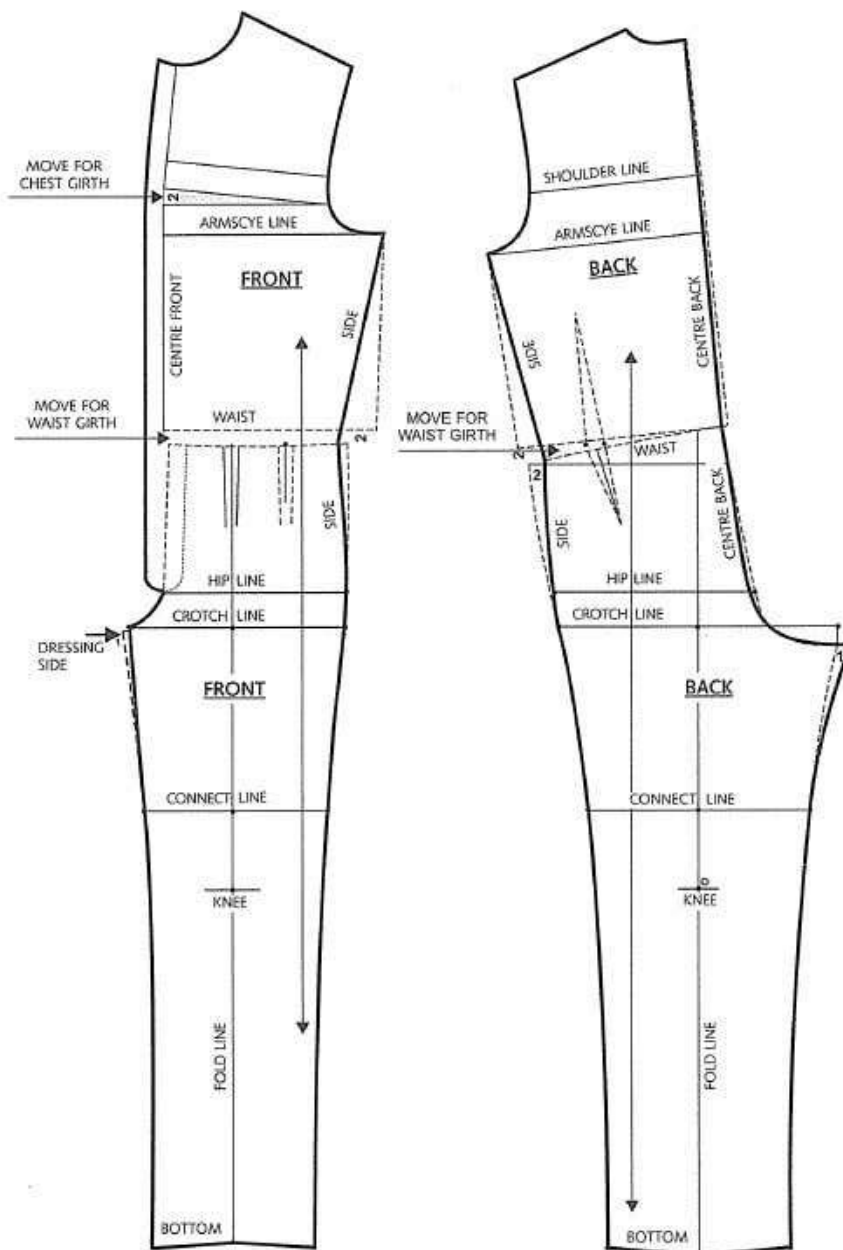
- Front

- [Back](#)

- Cut along the C3-O4 line and extend the bottom by 3 cm.

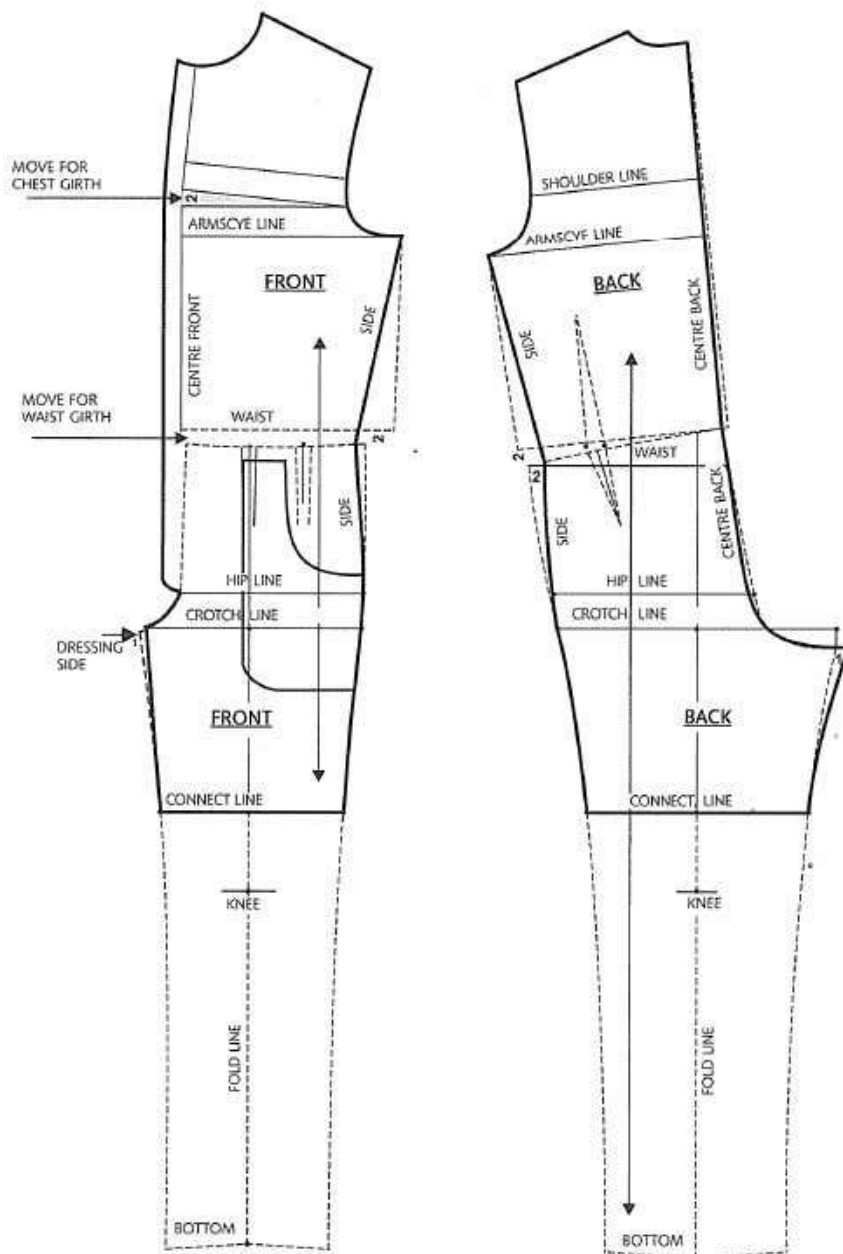


BASIC OVERALL



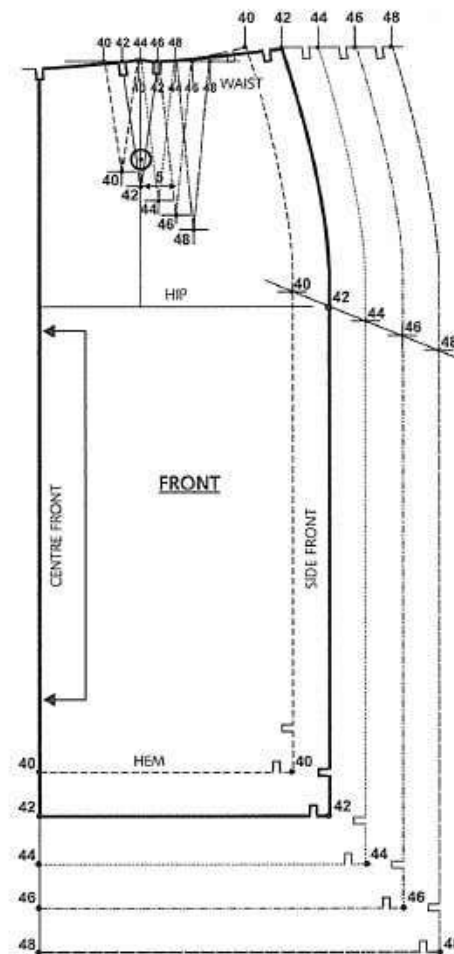
- Draw the basic trouser block with adequate ease.
- Draw the basic bodice pattern with ease like the trousers.
- Join the bodice front and back to the pants, setting them 2 cm from the centre back waistline and 2 cm from the upper part of the centre front, for ease of movement, as shown in the figure.
- Eliminate the darts of both the bodice and the pants and reduce the excess on the side as needed.
- Make a 2-2.5 cm extension for the closure placket.
- Finish the lines of the front and back.

SHORT OVERALL



- Draw the basic long overall.
- Draw the line for the desired leg length.
- Discard the lower part of legs.
- Carefully connect all the pattern lines.

SIZE GRADING



Size grading	244
Tools and equipment	245
The fundamental rules	246
Grading a pencil skirt	247
Grading the quarter-circle skirt	249
Grading culottes	250
Grading trousers	252
Charts	253

SIZE GRADING

Grading is the technique for reducing or enlarging basic pattern blocks, applying the increase values in terms of length and breadth, so as to make smaller and larger sizes without having to create a new block each time.

The starting size is usually an average one: 42 for women; 48 for men; 30 for children.

These base sizes can in any case vary from manufacturer to manufacturer, and also depend on the type of garment.

In the size grading, the proportions of the sizes are transformed without altering the look and the volumes of the original model.

MANUAL GRADING

Manual grading is carried out using a basic pattern comprehensive of the seams, previously tested, which is used for tracing out the outline, progressively developed.

The outlines of the other sizes are first marked with crosses made with a special square ruler marked off in millimeters, for applying the necessary values, then they are connected using the basic pattern as a stencil, in addition to the ruler and the square.

SPECIAL EQUIPMENT FOR MANUAL GRADING

The best known equipment for manual grading are: the Willcos & Gibbs Multigrader, which makes the grading and the cutting of the patterns, and the Swiss manufacturer Steiner's Variator, which, however, does not include the cutting device.

These pieces of equipment have devices for controlling horizontal and vertical movement, or a combination of the two, making it possible to develop the grading from the basic pattern block, held down by special mechanisms.

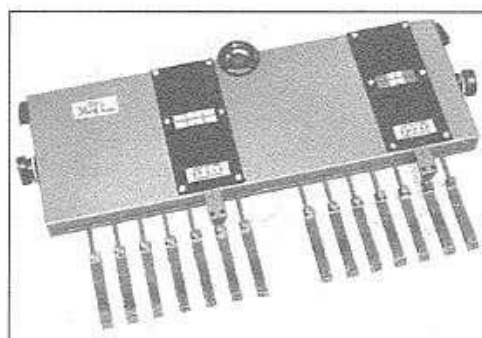
COMPUTERIZED SIZE GRADING

In the garment industry nowadays this process is carried out automatically using computer systems that apply specific mathematical formulae (algorithms).

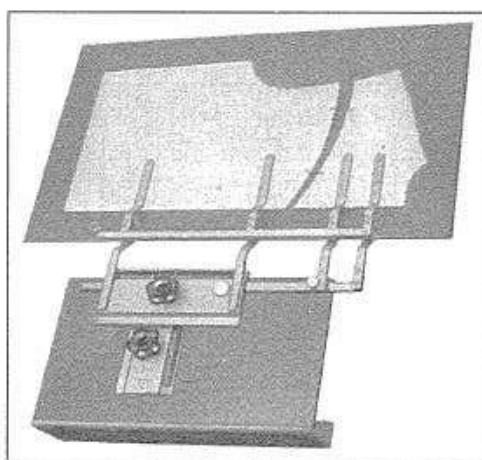
The working process is as follows: it starts by copying the original pattern of the basic size, made on cardboard and inclusive of the seam allowances, on the Cal Comp Curve Tracer or Digitalizer, a plotter device that automatically draws the outline of the pattern simply by pressing the button to activate the plotter head fitted with a reticulé that precisely centres the points along the layout.

There are two types of computerized grading:

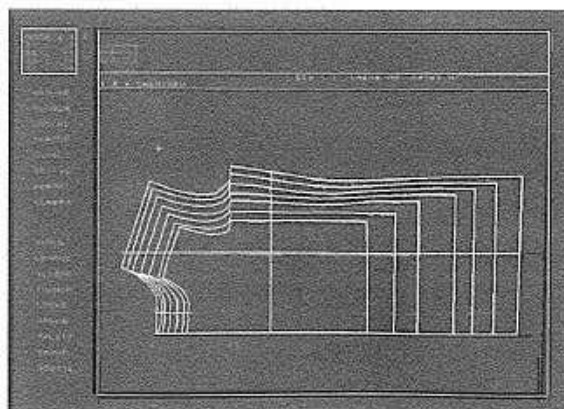
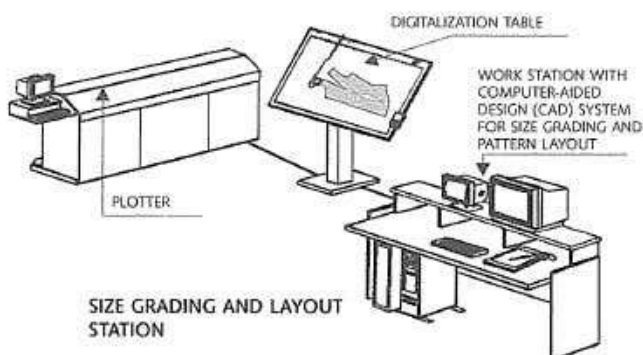
- 1) Using the incremental values entered beforehand in the computer, as called for by the program. These values are automatically applied for the development of the other sizes, whether smaller or larger, as occurs with manual grading.
- 2) Using the size chart, with which the calculations for each size are made over, like the calculations made for the basic size, leaving unaltered the balance of the sizes and the volumes.



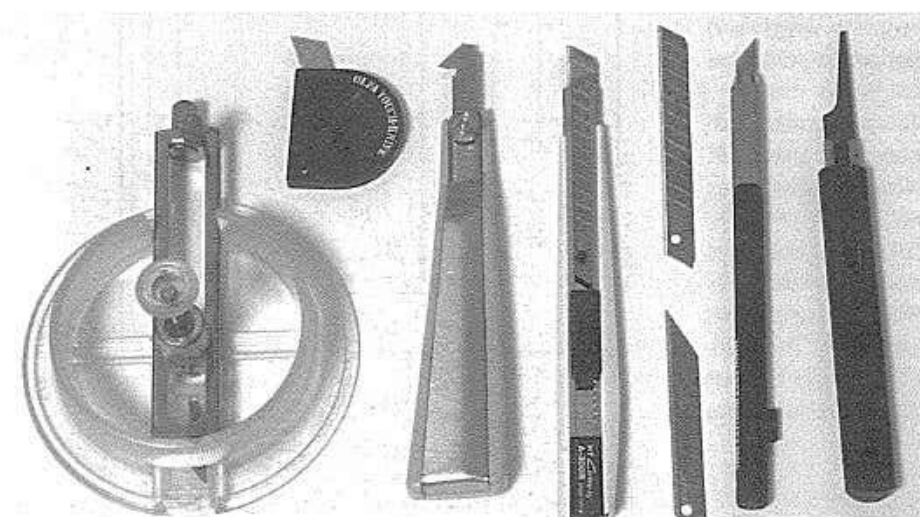
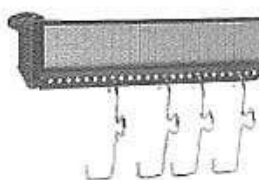
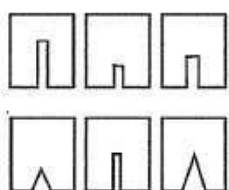
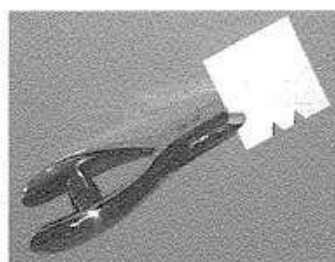
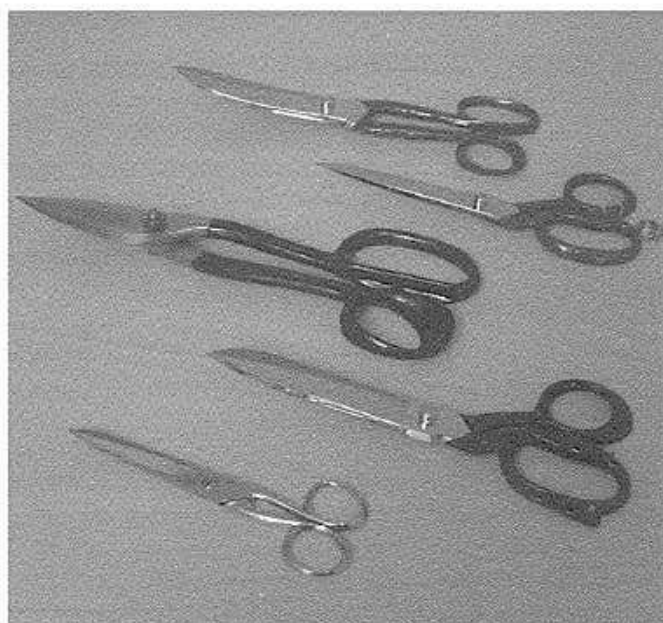
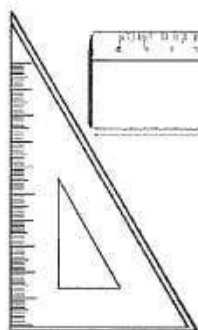
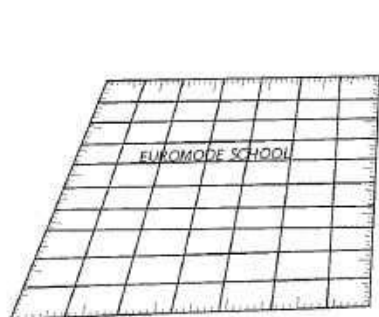
EQUIPMENT MULTIGRADER



EQUIPMENT VARIATOR



TOOLS AND EQUIPMENT



THE FUNDAMENTAL RULES

Before implementing the grading, it is very important to do checking and some work in order to have the certainty that, when the job is finished, the pattern will be perfectly proportioned.

- 1) Make sure that the straight of grain is indicated on each piece, as this is the line that we shall depend on for calculating all the points that have to be developed.
- 2) Make sure the pattern includes the seam allowances.
- 3) Make sure that the various pieces fit together and that they are all there, to avoid surprises at the end.

Procedure for grading

- Spread a sheet of pattern paper on the table, suitable in terms of both consistency and size.
- Lay the manilla pattern on the sheet, and put weights on top of it to avoid it shifting, and trace off the outlines using a fine-tipped pencil.
- Mark the reference points, such as the straight grain, the notches, the darts, and so forth.
- Remove the manilla base and, after carefully checking that everything has been marked down, complete the drawing of the pattern, even in the areas that were covered by the manilla.
- Set your overall increase and decrease values, both in length and width, for each size to be graded, and calculate the amount for each piece to be developed.

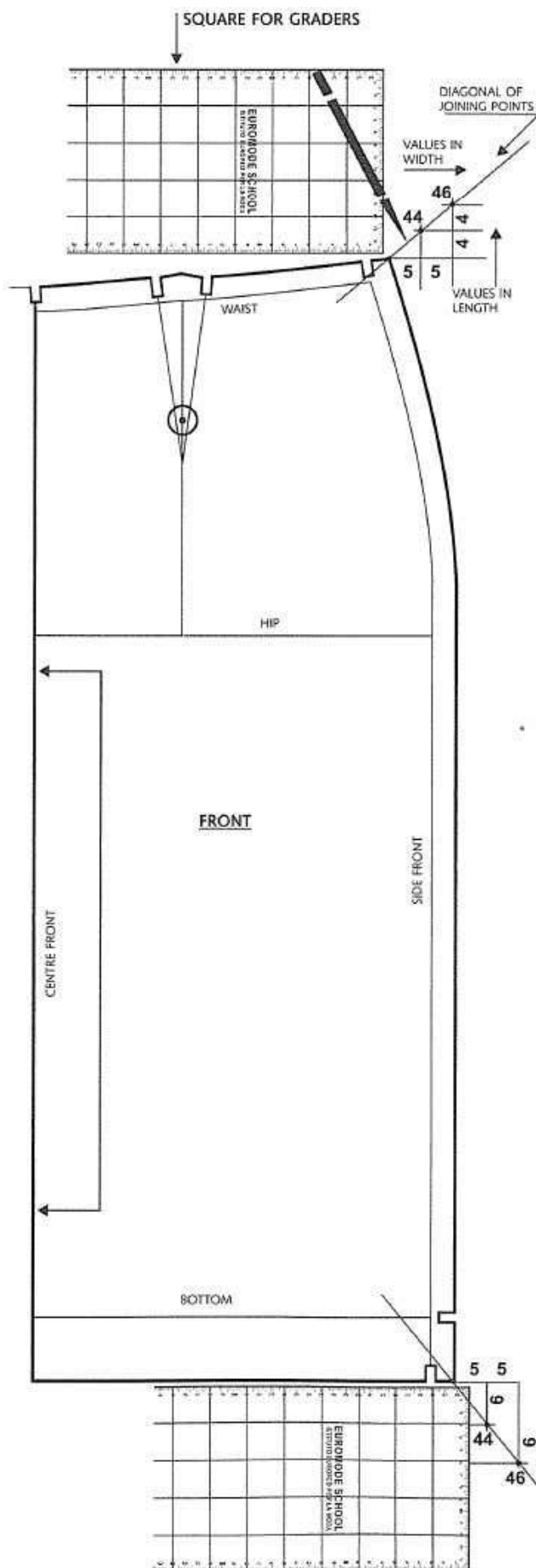
This concept is very important in the development of sizes for maintaining unaltered the garment's proportions, especially if in the pattern there are several pieces to which must be assigned the right value for the development.

For example, if we had to distribute 10 mm over a pattern that has two sectors, first we have to establish which of the two pieces is larger and which is smaller, and, on this basis, assign a greater or lesser value in length or in width.

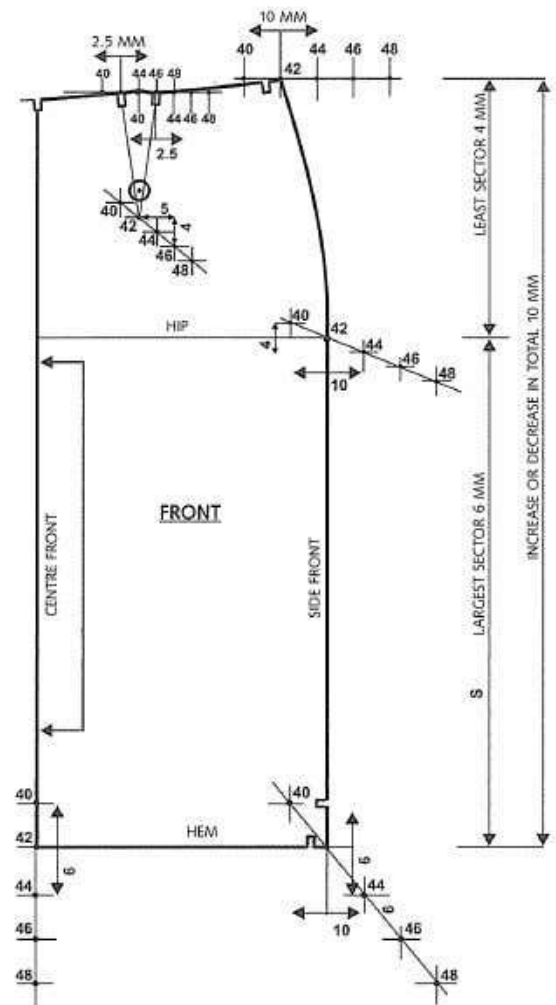
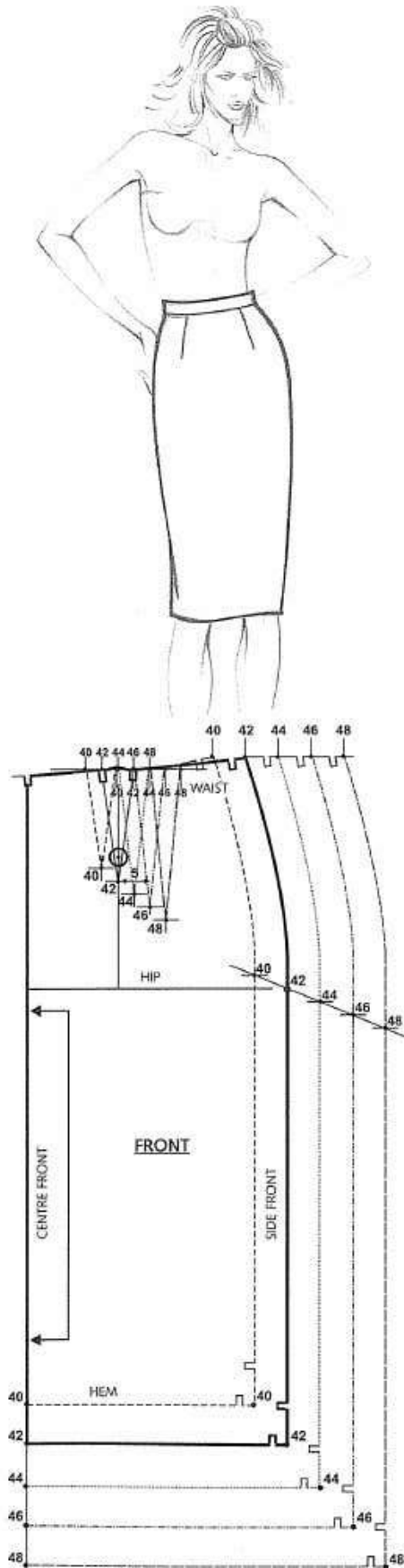
Once we have mastered this mechanism of proportions, any problem in developing the grading is easily overcome, also in light of the fact that there are patterns made up of many pieces and the garment industry does not always use the same grading values. In this book, we do the grading starting from a base size of 42 with the measurements shown in our size chart. The value established for the difference in length and width is shown as a double figure so that the grading diagonal can be drawn with greater precision.

All the other points relative to the sizes you want to make will be plotted along this diagonal, joining the straight lines with the help of a ruler by straight line and the curves and various contours with the original manilla pattern pieces.

From a base pattern no more than 3 sizes larger and 3 sizes smaller can be made maintaining the proportions of the sizes and volumes. If more sizes are desired, a new base pattern must be created, closer to the larger or smaller sizes. The grading, depending on the requirements, should be carried out keeping certain features stable: the dart, the centre front, the centre back, etc.



GRADING A PENCIL SKIRT



GRADING THE SKIRT KEEPING FIXED THE CENTRE FRONT AND THE WAIST POINT

Width

The skirt narrows and widens a total of 4 cm, and therefore a one-quarter pattern piece should narrow or widen by 10 mm overall, in this case distributed as follows:

- 5 mm at the centre front at the start.
- 5 mm at the side at the end.

Length

The length increases and decreases a total of 10 mm, distributed as follows:

- 4 mm from the waist to the side.
- 6 mm from the side to the hem.

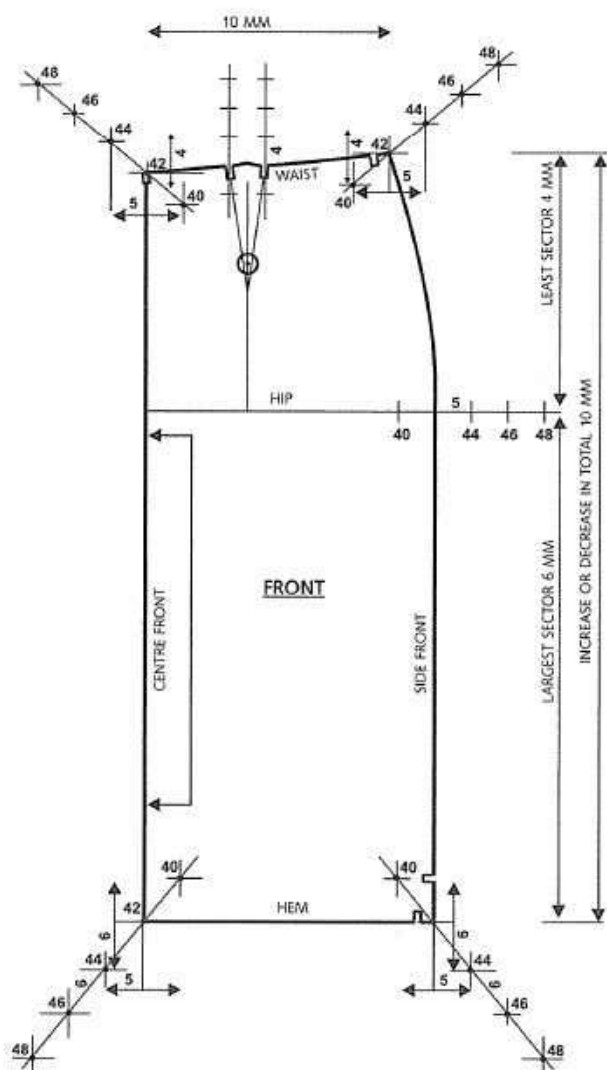
The width of the dart remains unchanged for all the sizes, while its length increases or decreases by 4 mm.

Note: The same procedure is used for the front and back.

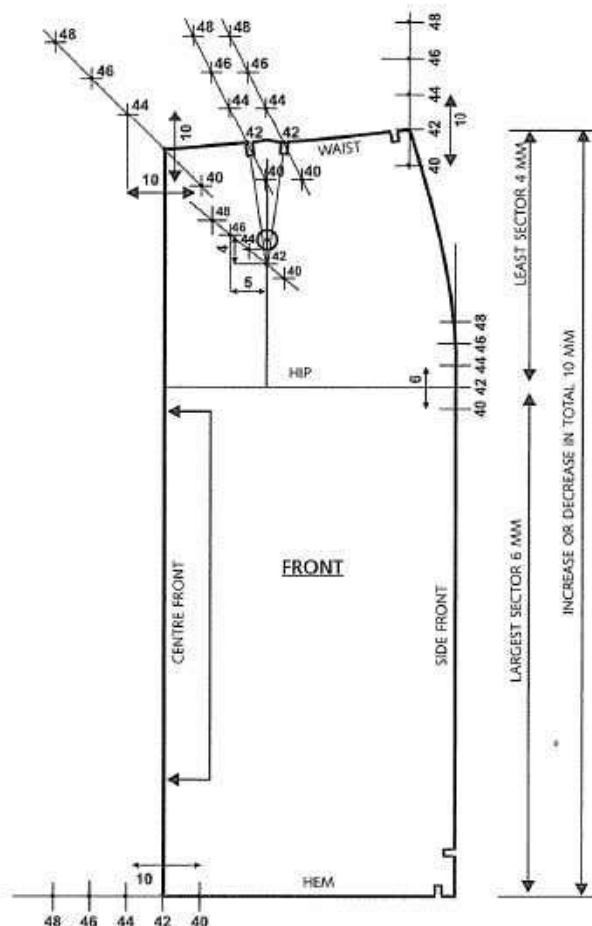
Note: The movements are carried out in real size, while the drawing is done in reduced scale.

GRADING A PENCIL SKIRT

GRADING THE SKIRT KEEPING FIXED THE DART AND THE SIDE SEAM.



GRADING THE SKIRT KEEPING FIXED THE SIDE SEAM AND THE HEM.



Width

In this case, too, the skirt narrows or widens by a total of 4 cm, and therefore by 10 mm per quarter-pattern, as follows:

- Narrow or widen the centre front by 5 mm.
- Narrow or widen the hip line by 5 mm.

Length

The length increases or decreases by 10 mm overall, distributed as follows:

- Raise or lower the waist point by 4 mm.
- Lengthen or shorten the hem by 6 mm.
- Raise or lower the tips of the waist darts by 4 mm.

Width

Here, too, the skirt narrows or widens by 4 cm total, and therefore by 10 mm per quarter-pattern, as follows:

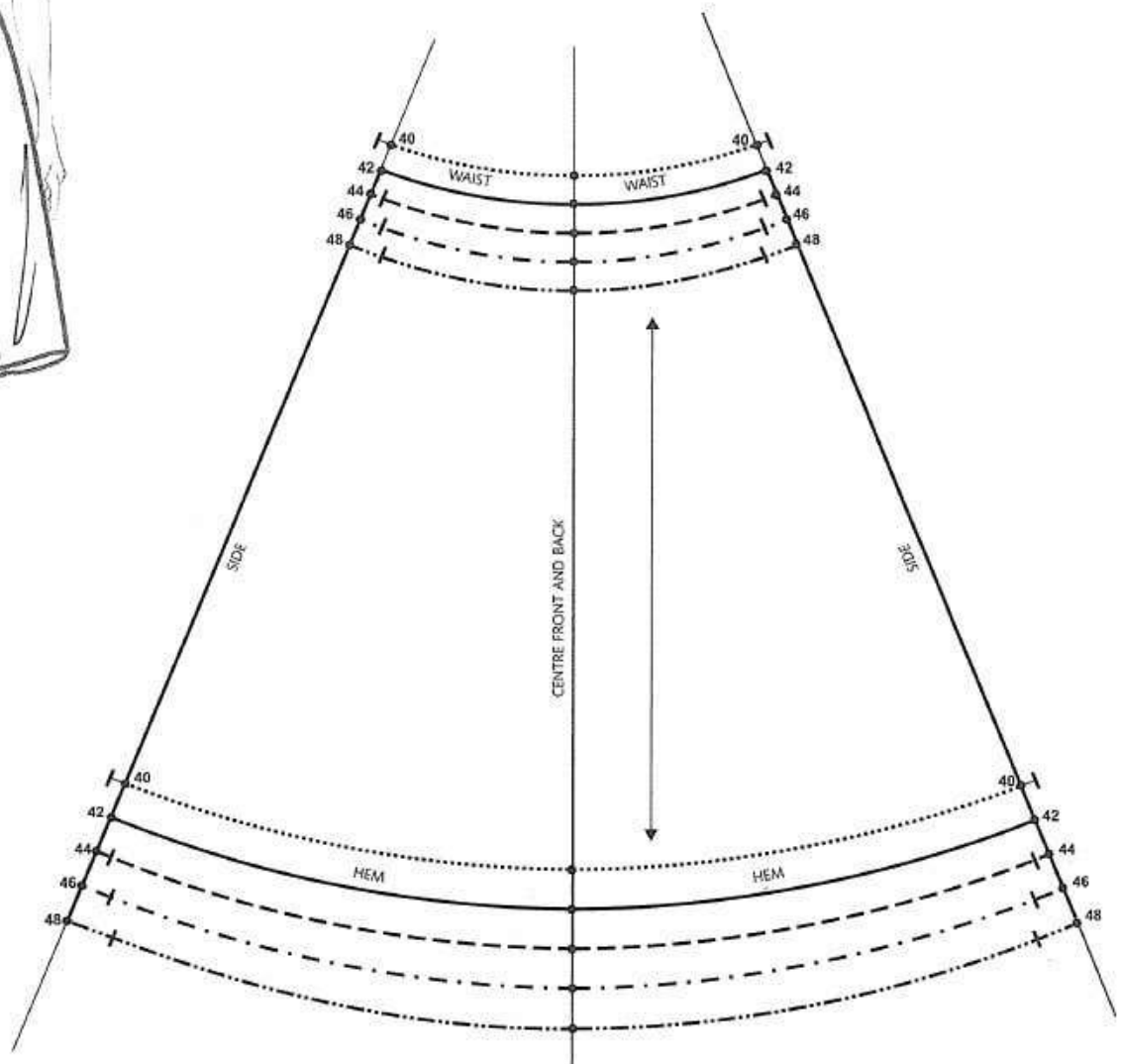
- Increase or decrease by 5 mm the distance from the side seam to the dart.
- Increase or decrease by 5 mm the distance from the dart to the centre front.

Length

The length increases or decreases by 10 mm overall, distributed as follows:

- Increase or decrease by 4 mm from the side to the waist.
- Increase or decrease by 6 mm from the side to the hem.
- Raise or lower the tips of the the waist darts by 4 mm.
- Move the tips of the darts 5 mm towards the centre front.

GRADING THE QUARTER-CIRCLE SKIRT



To carry out the grading of quarter-circle, half-circle and full-circle skirts, the procedure is as follows:

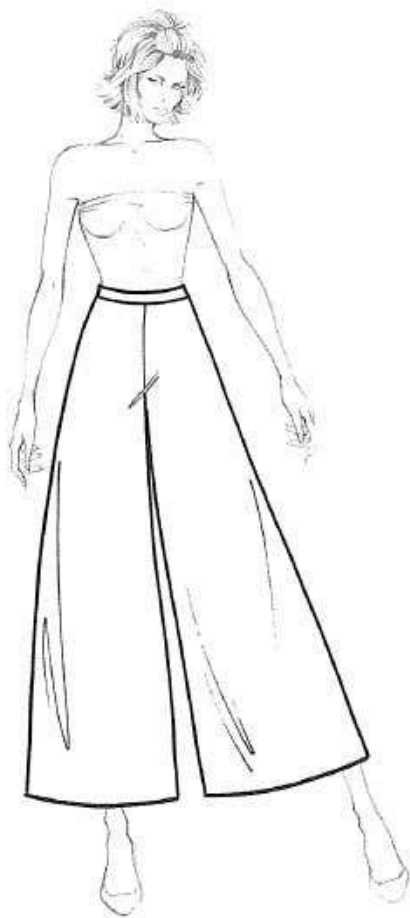
- Trace off the basic pattern block on a sheet of pattern paper, using the already industrialized manila pattern.
- Extend the lines of the centre and the sides both upwards and downwards.
- Again lay the manila pattern on the pattern paper where the

outline was drawn and run it up and down along the centre line until the established waist measurement is achieved, increased or reduced by 1 cm per side, then trace off the outline with the same manila pattern.

- The hemline is shifted 1 cm higher or lower (depending on whether it is a smaller or larger size) with respect to the basic pattern.

GRADING CULOTTES

KEEPING FIXED THE CENTRE FRONT, THE CENTRE BACK AND THE INSEAM



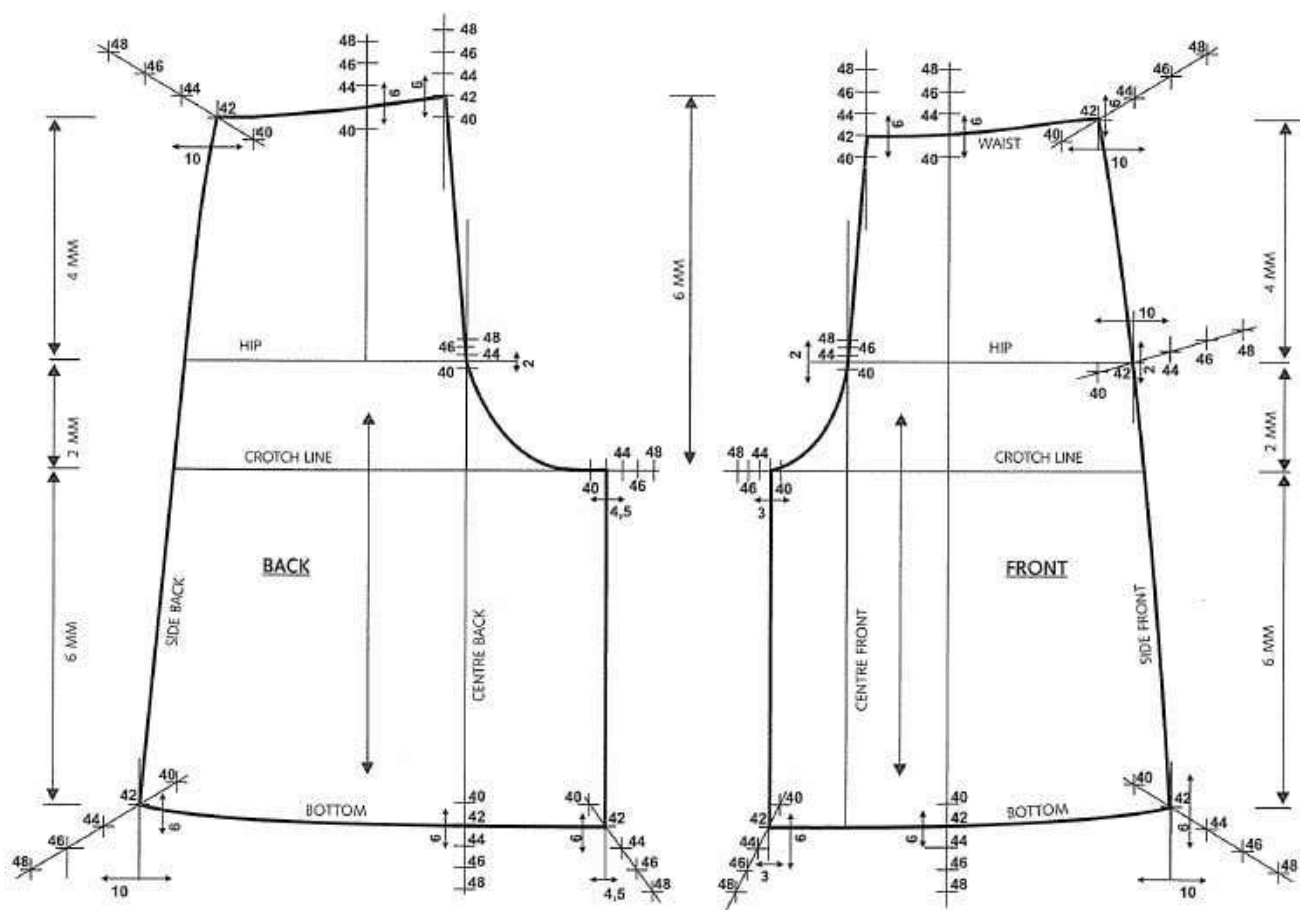
The length of culottes is subdivided into three sectors: Waist-Side; Side-Inseam; and Inseam-Hem.

The width, instead, is divided into two sectors: Side-Centre front (or Centre back) and Centre front (or Centre back)-Inseam.

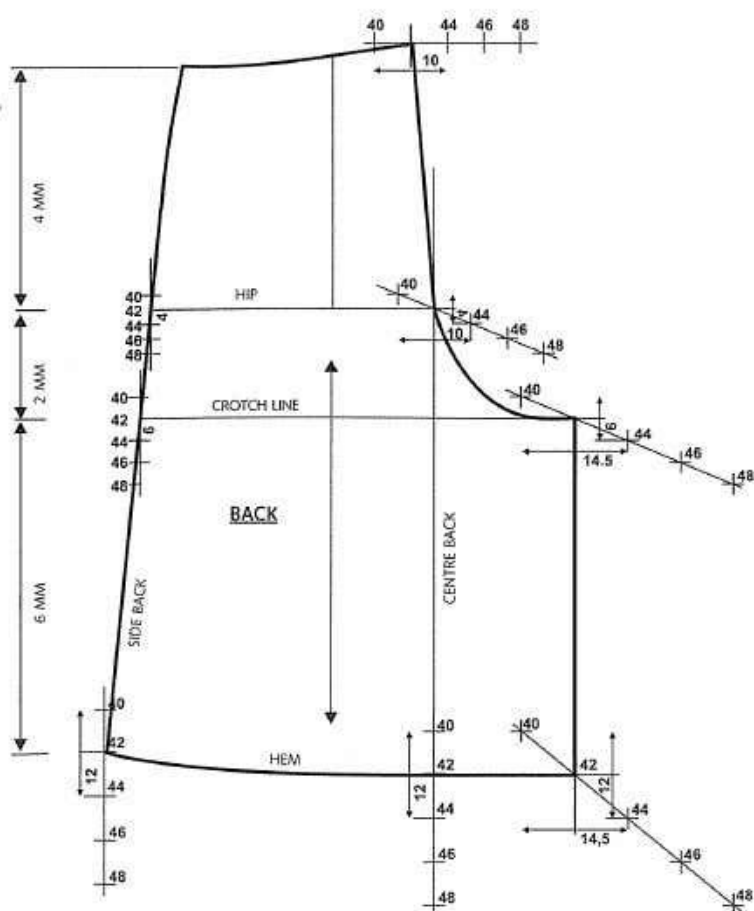
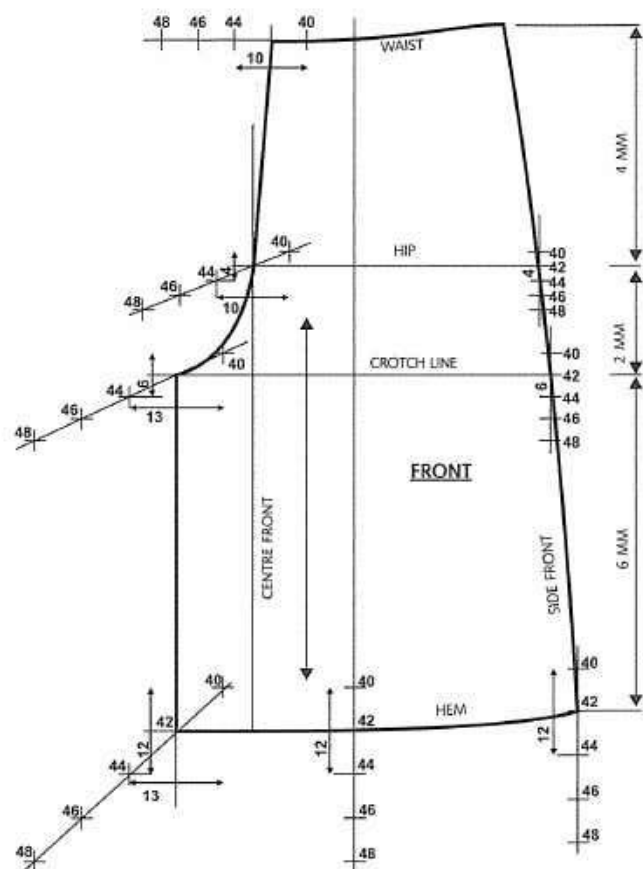
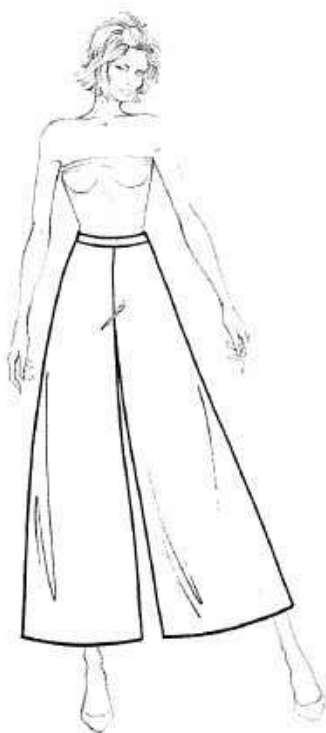
As you can see, the inseam is lower with respect to the side seam, thus, in making the proportions, it will be necessary to increase (or decrease) it by more.

In the case of the pattern illustrated here, in this sector it lengthens (or shortens) by 2 mm.

Moreover, as the inseam is shifted with respect to the centres front and back, it is increased at the front by 3 mm, while at the back by 4.5 mm, because the sector is wider.



THE SIDE AND THE WAIST ARE FIXED



KEEPING FIXED THE INSEAM AND THE DART

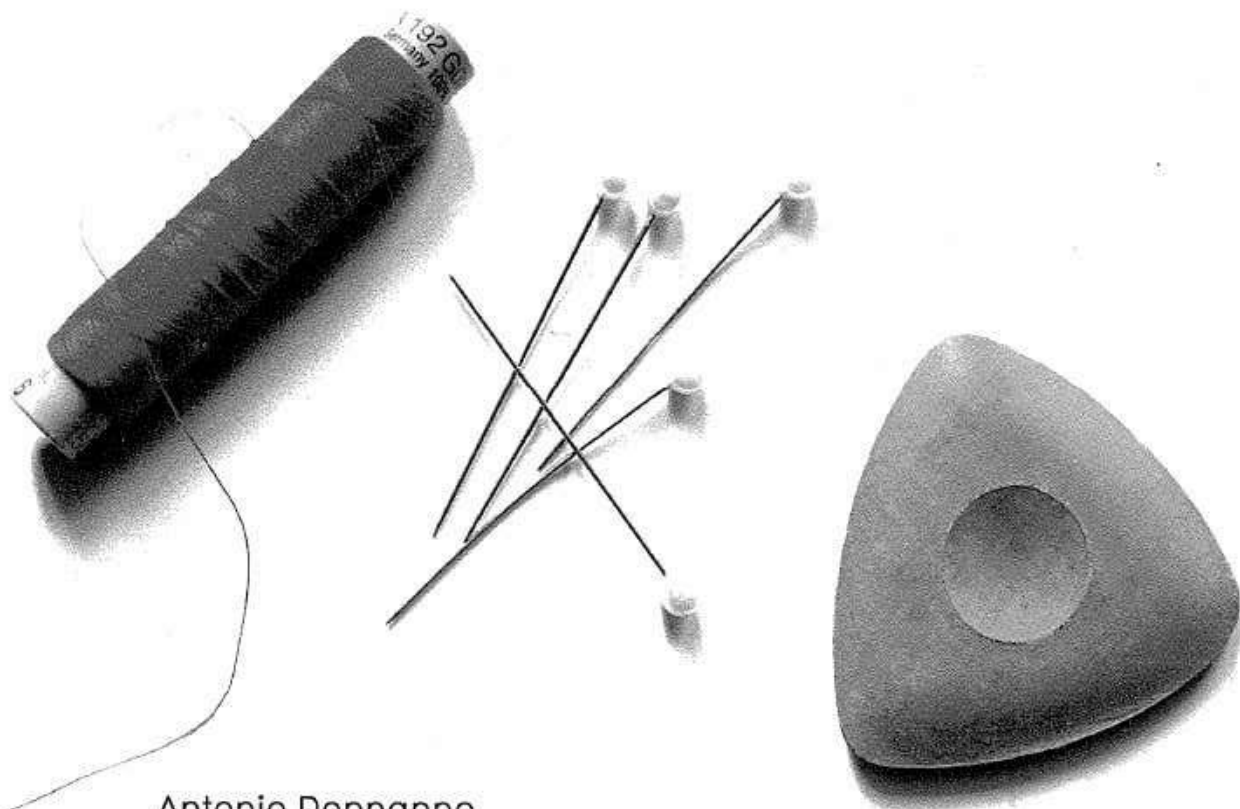


CHARTS

CHART OF PROPORTIONAL DISTRIBUTION											
Numbers	1/2	1/3	1/4	1/6	1/8	1/10	1.12	1/3.14	2/3.14	4/3.14	Numbers
20	10	6.6	5	3.3	2.5	2	1.6	6.4	12.7	25.5	20
22	11	7.3	5.5	3.6	2.7	2.2	1.8	7	14	28	22
24	12	8	6	4	3	2.4	2	7.6	15.3	30.6	24
26	13	8.6	6.5	4.3	3.2	2.6	2.1	8.3	16.6	33.1	26
28	14	9.3	7	4.6	3.5	2.8	2.3	8.9	17.8	35.7	28
30	15	10	7.5	5	3.7	3	2.5	9.5	19.1	38.2	30
32	16	10.6	8	5.3	4	3.2	2.6	10.1	20.4	40.8	32
34	17	11.3	8.5	5.6	4.2	3.4	2.8	10.8	21.6	43.3	34
36	18	12	9	6	4.5	3.6	3	11.5	22.9	45.9	36
38	19	12.6	9.5	6.3	4.7	3.8	3.1	12.1	24.2	48.4	38
40	20	13.3	10	6.6	5	4	3.3	12.7	25.5	51	40
42	21	14	10.5	7	5.2	4.2	3.5	13.4	26.8	53.5	42
44	22	14.6	11	7.3	5.5	4.4	3.6	14	28	56	44
46	23	15.3	11.5	7.6	5.7	4.6	3.8	14.6	29.3	58.6	46
48	24	16	12	8	6	4.8	4	15.3	30.6	61.1	48
50	25	16.6	12.5	8.3	6.2	5	4.1	15.9	31.8	63.7	50
52	26	17.3	13	8.6	6.5	5.2	4.3	16.6	33.1	66.2	52
54	27	18	13.5	9	6.7	5.4	4.5	17.2	34.3	68.8	54
56	28	18.6	14	9.3	7	5.6	4.6	17.8	35.6	71.3	56
58	29	19.3	14.5	9.6	7.2	5.8	4.8	18.5	36.9	73.9	58
60	30	20	15	10	7.5	6	5	19.1	38.2	76.4	60
62	31	20.6	15.5	10.3	7.7	6.2	5.1	19.7	39.5	79	62
64	32	21.3	16	10.6	8	6.4	5.3	20.4	40.7	81.5	64
66	33	22	16.5	11	8.2	6.6	5.5	21	42	84.1	66
68	34	22.6	17	11.3	8.5	6.8	5.6	21.6	43.3	86.6	68
70	35	23.3	17.5	11.6	8.7	7	5.8	22.3	44.6	89.2	70
72	36	24	18	12	9	7.2	6	22.9	45.8	91.7	72
74	37	24.6	18.5	12.3	9.2	7.4	6.1	23.6	47.1	94.2	74
76	38	25.3	19	12.6	9.5	7.6	6.3	24.2	48.4	96.8	76
78	39	26	19.5	13	9.7	7.8	6.5	24.8	49.7	99.3	78
80	40	26.6	20	13.3	10	8	6.6	25.5	50.9	101.9	80
82	41	27.3	20.5	13.6	10.2	8.2	6.8	26.1	52.2	104.4	82
84	42	28	21	14	10.5	8.4	7	26.8	53.5	107	84
86	43	28.6	21.5	14.3	10.7	8.6	7.1	27.4	54.8	109.5	86
88	44	29.3	22	14.6	11	8.8	7.3	28	56	112.1	88
90	45	30	22.5	15	11.2	9	7.5	28.7	57.3	114.6	90
92	46	30.6	23	15.3	11.5	9.2	7.6	29.3	58.6	117.2	92
94	47	31.3	23.5	15.6	11.7	9.4	7.8	29.9	59.9	119.7	94
96	48	32	24	16	12	9.6	8	30.6	61.1	122.3	96
98	49	32.6	24.5	16.3	12.2	9.8	8.1	31.2	62.4	124.8	98
100	50	33.3	25	16.6	12.5	10	8.3	31.8	63.7	127.4	100

Total or partial reproduction is prohibited, even if the source is cited.

ENGLISH MEASUREMENTS CONVERSION TABLE			
From yards to metres	From metres to yards	From inches to centimetres	From centimetres to inches
1/4 yd = 0.229 m	0.25 m = 9 7/8"	1" = 2.54 cm	1 cm = 3/8"
1/2 yd = 0.457 m	0.50 m = 19 5/8"	2" = 5.08 cm	2 cm = 3/4"
3/4 yd = 0.686 m	0.75 m = 29 1/2"	3" = 7.62 cm	3 cm = 1 1/8"
1 yd = 0.914 m	1 m = 1 yd 3 3/8"	4" = 10.16 cm	4 cm = 1 1/2"
1 1/4 yds = 1.143 m	1.25 m = 1 yd 13 3/4"	5" = 10.70 cm	5 cm = 1 7/8"
1 1/2 yds = 1.372 m	1.50 m = 1 yd 23"	6" = 15.24 cm	6 cm = 2 3/8"
1 3/4 yds = 1.60 m	1.75 m = 1 yd 32"	7" = 17.78 cm	7 cm = 2 3/4"
2 yds = 1.82 m	2 m = 2 yds 6 3/4"	8" = 20.32 cm	8 cm = 3 1/8"
2 1/4 yds = 2.058 m	2.25 m = 2 yds 16 5/8"	9" = 22.86 cm	9 cm = 3 1/2"
2 1/2 yds = 2.286 m	2.50 m = 2 yds 26 3/8"	10" = 25.4 cm	10 cm = 3 7/8"
2 3/4 yds = 2.515 m	2.75 m = 3 yds 1 1/4"	11" = 27.94 cm	11 cm = 4 1/4"
3 yds = 2.743 m	3 m = 3 yds 10 1/8"	12" = 30.48 cm	12 cm = 4 5/8"
3 1/4 yds = 2.972 m	3.25 m = 3 yds 20"	13" = 33.02 cm	13 cm = 5"
3 1/2 yds = 3.20 m	3.50 m = 3 yds 29 3/4"	14" = 35.56 cm	14 cm = 5 3/8"
3 3/4 yds = 3.429 m	3.75 m = 4 yds 3 5/8"	15" = 38.1 cm	15 cm = 5 3/4"
4 yds = 3.558 m	4 m = 4 yds 13 1/2"	16" = 40.64 cm	16 cm = 6 1/4"
4 1/4 yds = 3.887 m	4.25 m = 4 yds 23 3/8"	17" = 43.18 cm	17 cm = 6 5/8"
4 1/2 yds = 4.115 m	4.50 m = 4 yds 33 1/8"	18" = 45.72 cm	18 cm = 7"
4 3/4 yds = 4.344 m	4.75 m = 5 yds 7"	19" = 48.26 cm	19 cm = 7 3/8"
5 yds = 4.572 m	5 m = 5 yds 13 7/8"	20" = 50.8 cm	20 cm = 7 3/4"
		21" = 53.34 cm	25 cm = 9 5/8"
		22" = 55.88 cm	30 cm = 11"
		23" = 58.42 cm	35 cm = 15 3/4"
		24" = 60.96 cm	40 cm = 15 3/4"
		25" = 63.3 cm	45 cm = 17 3/4"



Antonio Donnanno

Fashion Patternmaking Techniques [Vol. 1]

How to Make Skirts, Trousers and Shirts. Women / Men

Skirts / Culottes / Bodices and Blouses /

Men's Shirts and Trousers / Size Alterations

An introductory course in pattern design, for pattern designers, tailors, stylists and fashion professionals.

This volume, divided into eight chapters, offers a wealth of in-depth knowledge relating to pattern design, beginning with a detailed study of people's measurements and builds, textile technology and tailoring terminology. It contains a comprehensive study of all types of skirts and trousers, from the most basic to the most elaborate.

It also explores making patterns for men and examines making alterations for different sizes.

ANTONIO DONNANNO began in his career in his family's tailor shop and later, after majoring in history and philosophy, focused on the teaching of costume history and patternmaking techniques. In 1982, he founded the acknowledged Euromode School Italia in Bergamo, which soon expanded with new branches on the international stage and where, alongside his teaching duties, Donnanno also serves as director. Antonio Donnanno has written dozens of books about fashion and has his own consulting firm, focusing on patternmaking and business.

£22.50 | \$39.95(USAonly)
ISBN 978-84-15967-09-5

