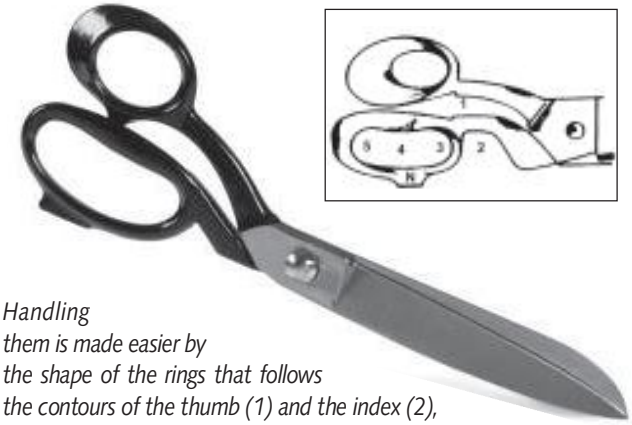
1) Cutter's shears
The shears used by pattern cutters may be as long as 50 cm, and weigh as much as 1 kg.



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

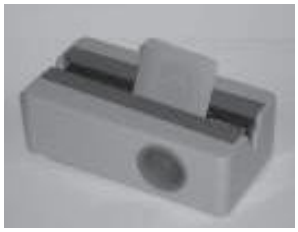
7) Cutting table
The table used in the cutting room is composed of a metal structure with a surface in tempered hardboard over a supporting layer of chipboard. Cutting tables range in width from 110 to 200 cm; their height is about 1 m, and they may be equipped with a fabric feeding or spreading system.

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.

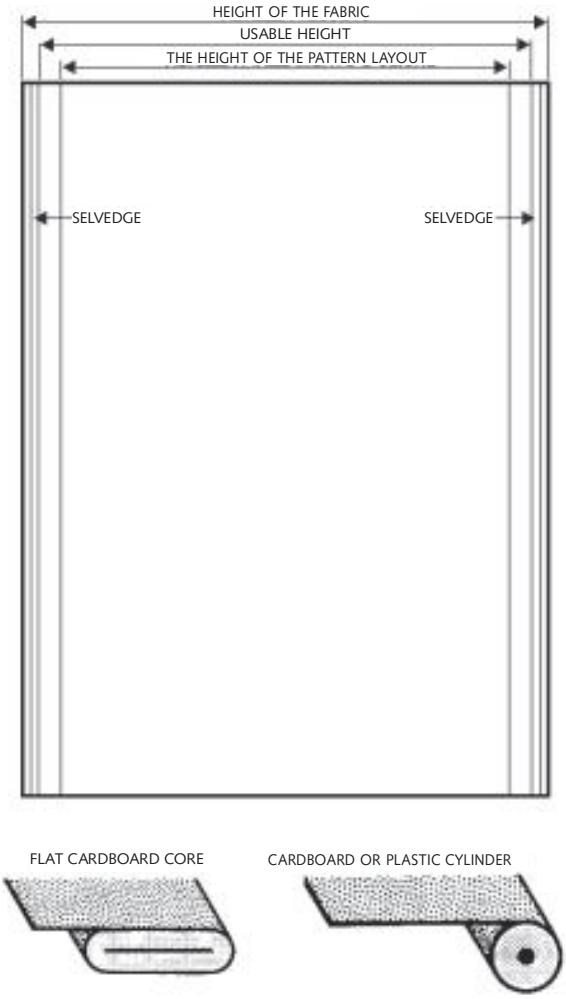
13) Needles
The size and type of needle used depends both on the job to be done and on the fabric to sew. Needles for handsewing are numbered inversely with respect to their thickness. There are various kinds of needle, in relation to the job they are meant to perform: needles for sewing machines and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

Height of the fabric

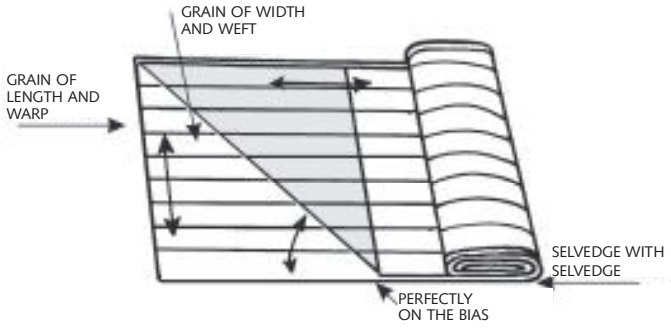
The height of the fabric is the measurement expressed in linear centimetres of the distance between one selvedge and the other.
The usable height excludes from the above measurement the two selvedges, which range from a few millimetres to a few centimetres.
The height of the pattern layout is established 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

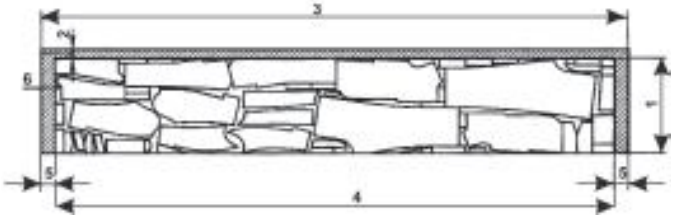
The grain of the fabric is the same direction as the warp or the selvedge.
Loom-woven fabrics are made up of longitudinal threads that intersect with the cross-threads.
When these threads are perpendicular to one another, it is a straight grain fabric.
It is very important to make sure that the fabric 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 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 selvedges).
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.

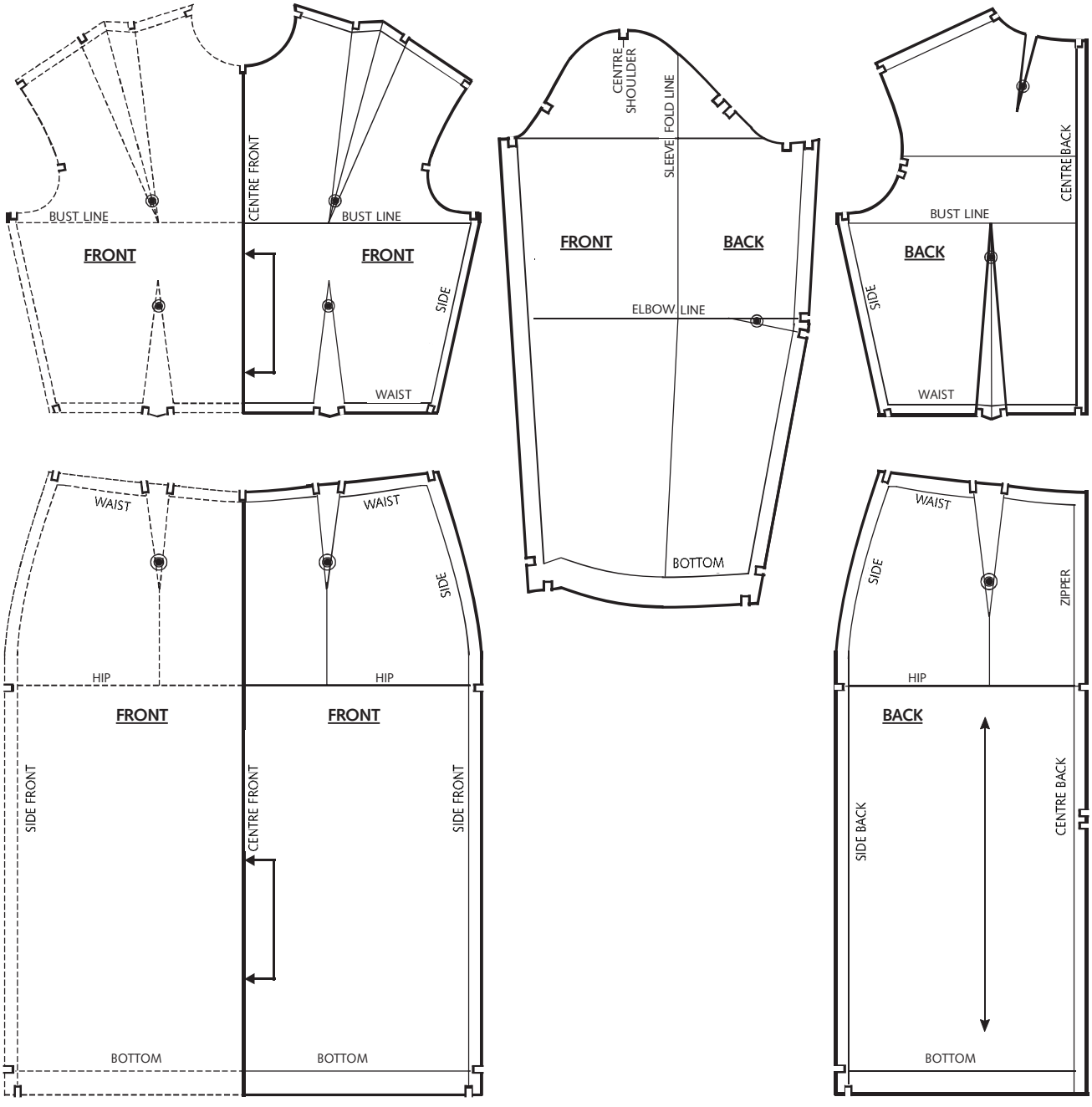
Characteristics of the fabric to be cut



1) Usable height – width of the fabric minus the width of the selvedges.
2) Selvedge 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.

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.



Industrial chart of women's measurements

Women's size chart without comfort allowances

Measurements of circumference						
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 over-coat	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

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.

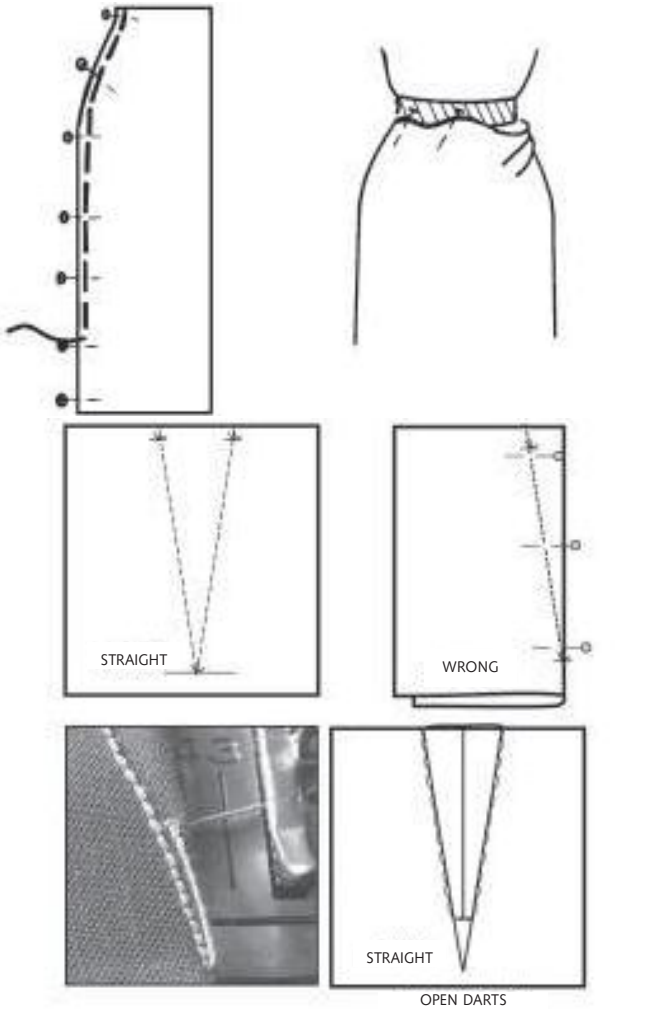
Basting the skirt
The skirt can be basted in the following order:
- Baste the darts.
- Sew all the seams.
- Baste the zipper.
- For the fitting, just baste the waistband beneath the waist edge, without folding it.

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.

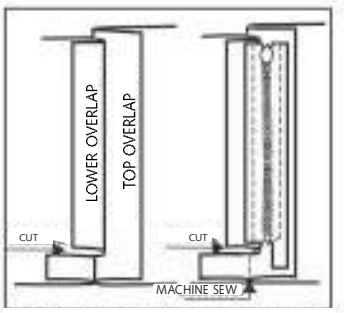
Inserting the zipper
The zipper must be inserted perfectly if you do not wish to run into problems or lose that elegant, professional look.
Hidden zipper on both sides
- Sew the opening with long stitches.
- Iron the seam and remove the stitches.
- Baste the zipper starting from the top, in such a way 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.



OPEN DARTS

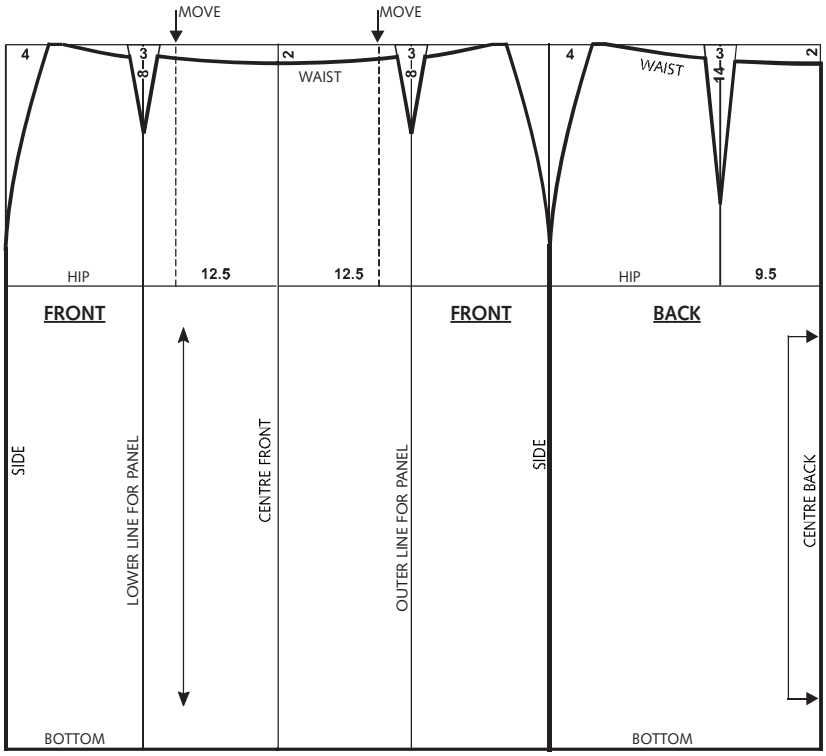

HIDDEN ZIPPER COVERED ON BOTH SIDES



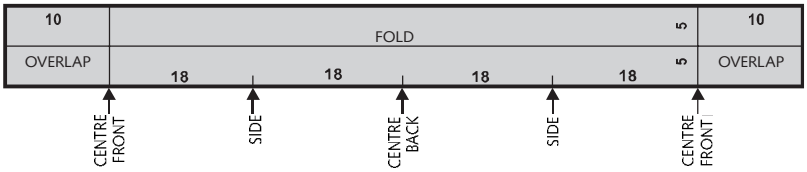
HIDDEN ZIPPER COVERED ON ONE SIDE

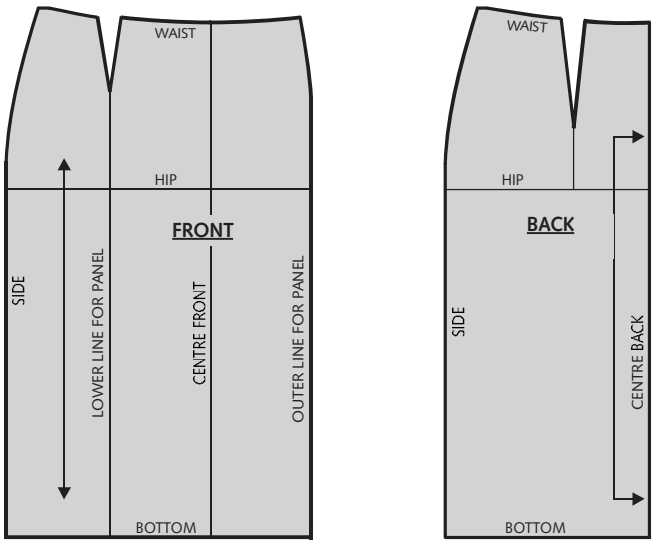

HIDDEN ZIPPER COVERED ON ONE SIDE

FRONT-WRAP SKIRT



WAISTBAND

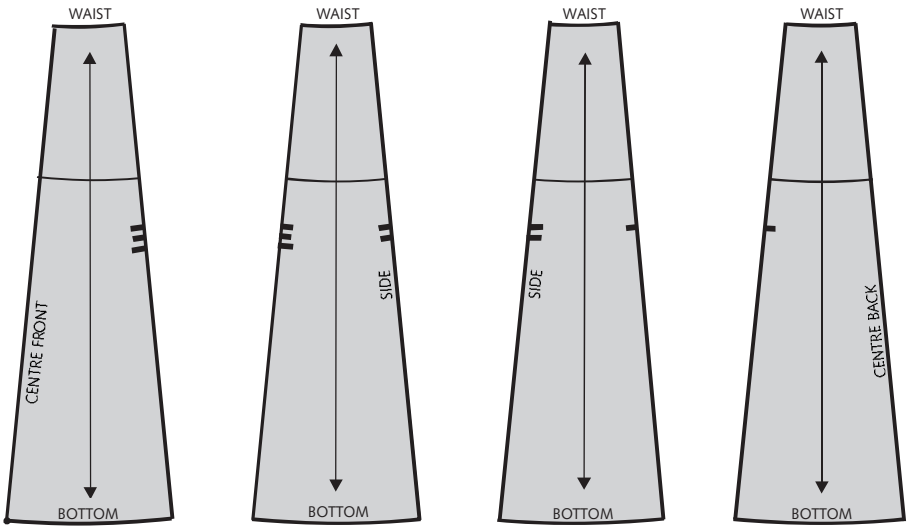




- Draw the basic pattern of the pencil skirt.
- Construct the other half of the front as a mirror-image of the centre front.
- Move the centre of the waist darts by a few centimetres (e.g.: 3 cm) if greater overlap is desired.
- Lengthen the central line of the waist darts down to the hem, since they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

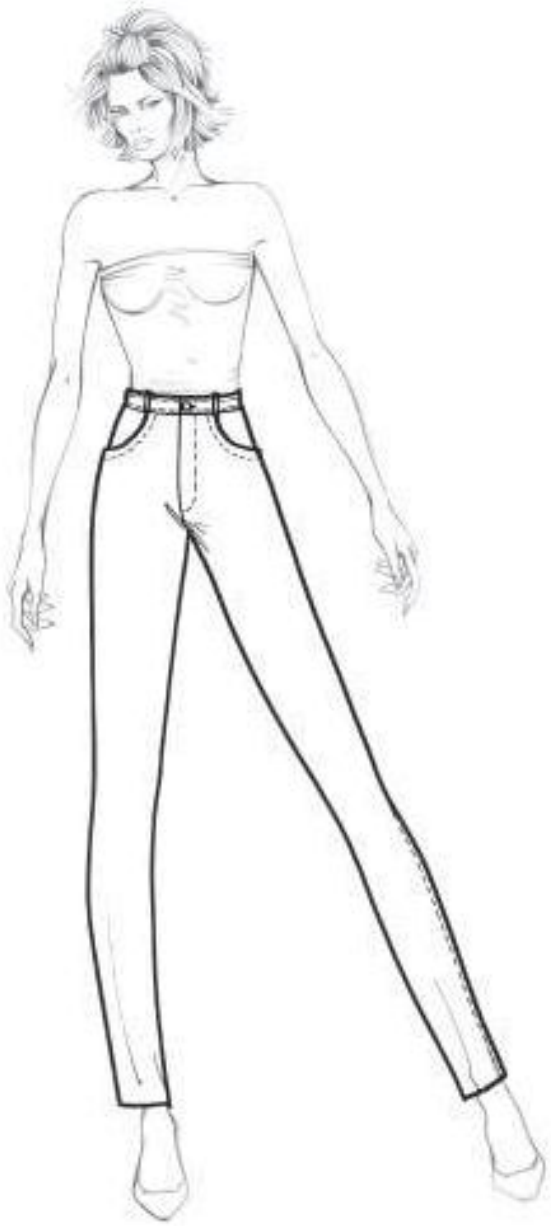
QUARTER-CIRCLE SKIRT WITH 8 PLEATS

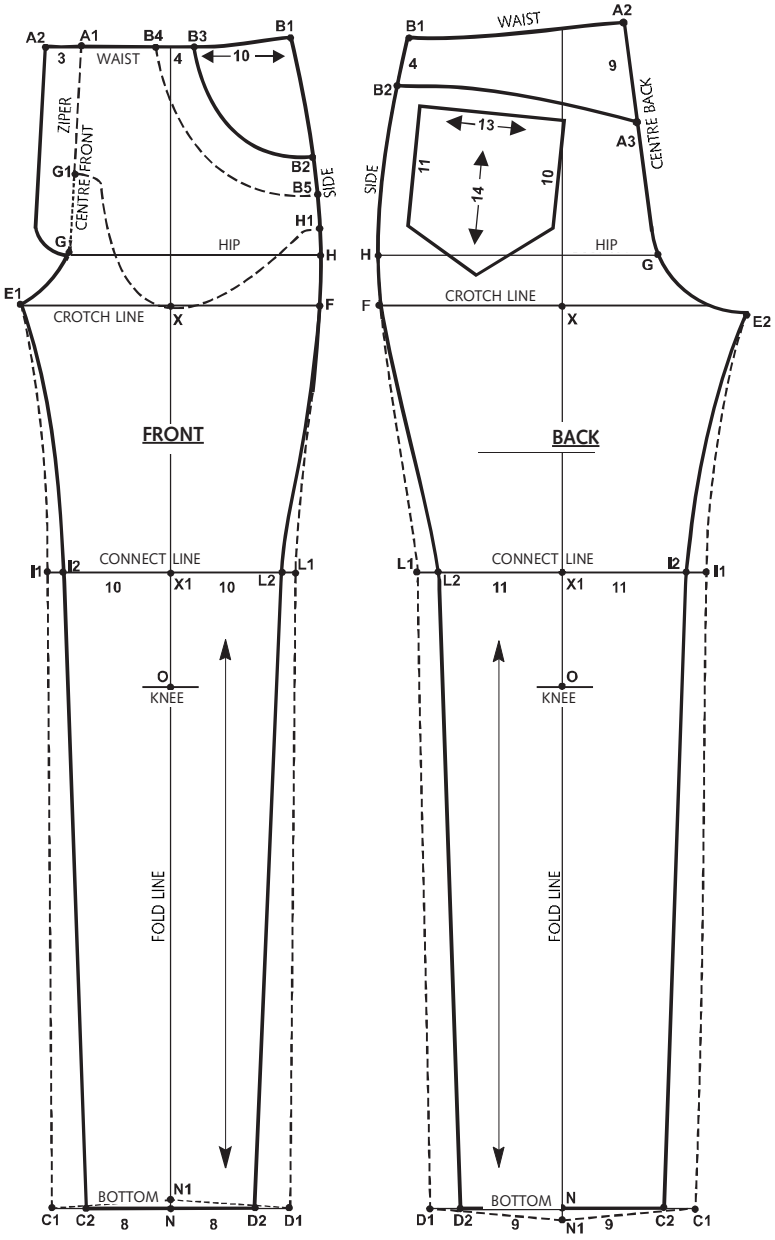
- Make the basic quarter-circle skirt block (see above).
- Divide the skirt in 4 equal parts at the bottom, and join the points with the vertex O.
- Mark the centre of each panel for positioning on the straight of grain.
- Mark the gores and make the notching.



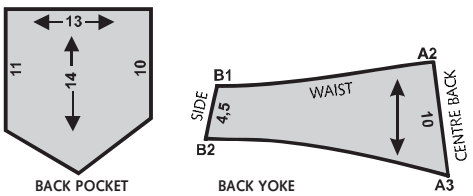
BASIC JEANS

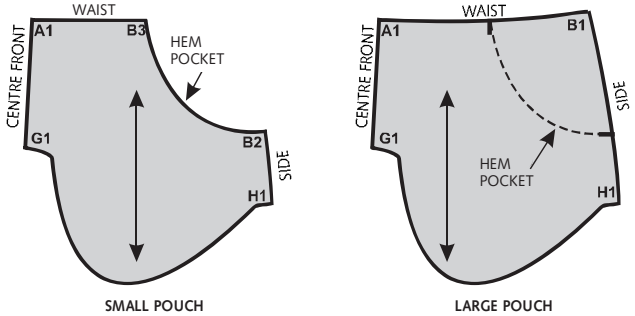
WITH BACK YOKE



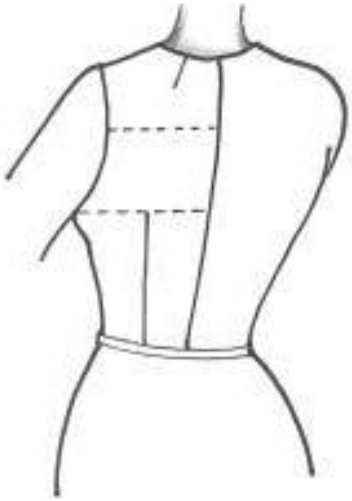


- Draw the basic trousers without dart.
- Reduce legs by 1.5 cm at points I1 and L1, both in front and in back.
- Draw points C2 and D2 with desired measurements (back is wider by 2 cm).
- Join the points E1-I2-C2 and F-L2-D2 on the front.
- Join the points E2-I2-D2 and F-L2-C2 on the back.
- Draw the 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.



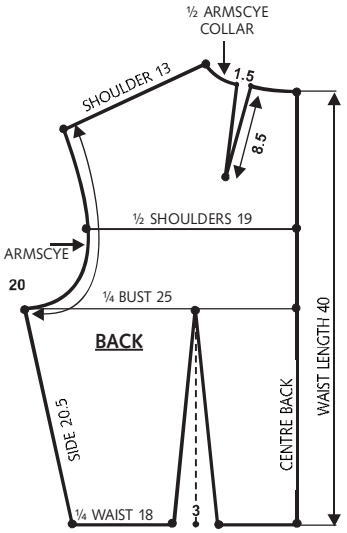


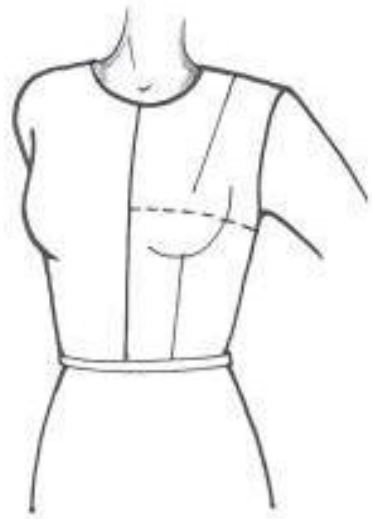
BASIC BODICE MEASUREMENTS



BACK

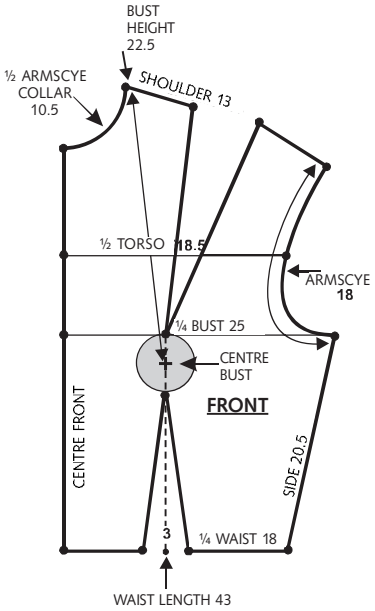
BACK
- ½ back neckline = 6 + 1.5 cm of dart.
- ¼ circumf. bust + ease = 25 cm.
- ½ width shoulders + ease = 19 cm.
- ¼ circumf. hips + ease (closed dart) = 18 cm.
- Length shoulders = 14 cm.
- Length back waist = 40 cm.
- ¼ circumf. hips + ease = 25 cm.
- Height shoulder line = 15.5 cm.
- Back armscye = 19.5 cm.
- Width neck dart = 1.5 cm.
- Length waist dart = 3 cm.
- Waistline tapering = 4 cm.





FRONT

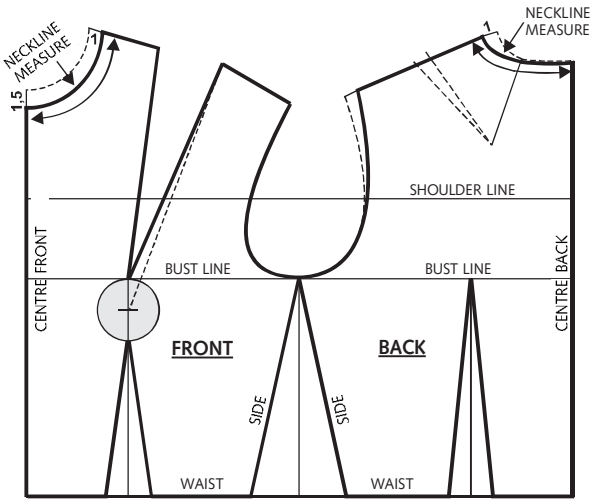
FRONT
- ½ front neckline = 9 cm.
- ¼ circumf. bust + ease = 25 cm.
- ½ torso + ease (closed dart) = 18.5 cm.
- ¼ circumf. waist + ease (closed dart) = 18 cm.
- ½ bust divergence = 9.5 cm.
- Shoulder (closed dart) = 14 cm.
- Hip + ease = 25 cm.
- Front waist length = 43 cm.
- Height bust line = 22.5 cm.
- Front armscye = 17.5 cm.
- Width bust dart = 6.5 cm.
- Length waist dart = 3 cm.
- Waistline tapering = 4 cm.

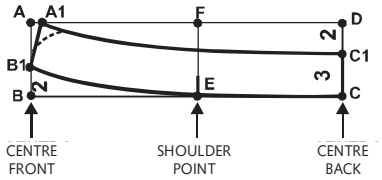


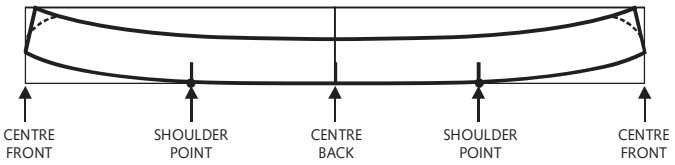
MEASUREMENTS BODICE - SIZE 42

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

MANDARIN COLLAR



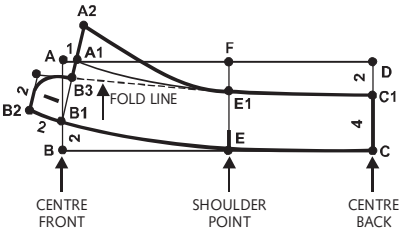




- Measure the bodice neckline.
- Draw a rectangle A-B-C-D with:
- A-B equal to collar height + 2 cm.
- B-C equal to ½ neckline front and back + 1 cm.
- B-B1 = 2 cm.
- D-C1 = 2 cm.
- C-E = measure rear neckline (e.g.: 8 cm).
- C-C1 = collar height.
- A-A1 = 1 cm.

Connect the points shaping as shown in the figure.

VERSION WITH POINTS AND BUTTON

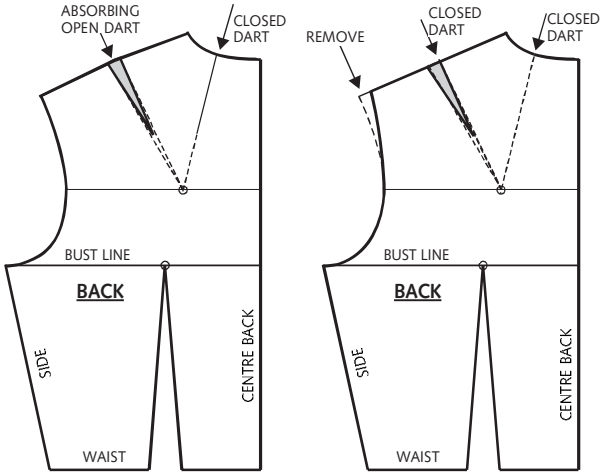


- Make the basic mandarin collar block with desired measures.
- B1-B2 = 2 cm.
- B1-B3 = 2 cm.
- A-A1 = 1 cm.
- B3-A2 = fold height (e.g.: 3.5 cm).
- Join E1-A2-B1-B2-B3.

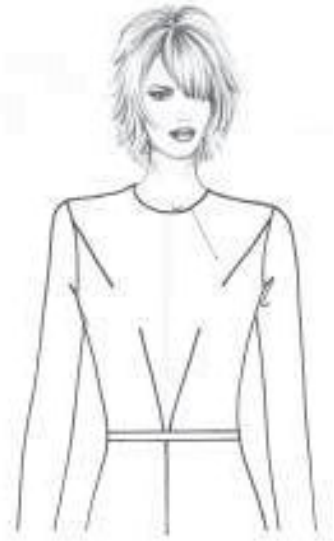
MOVING THE BACK DARTS

NECKLINE DART MOVED TO THE CENTRE SHOULDER

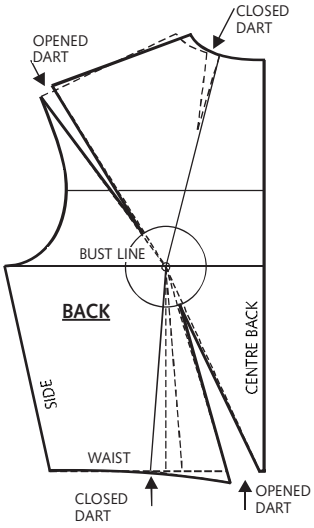
The back neckline dart must be removed when possible, as it is unattractive.
It can be eliminated in the following ways:
1) By merging the dart in the centre back, if there is a cut or a zipper or a fastening.
2) By moving the dart to the shoulder line, and thus allowing the dart width to be absorbed in the assembly of the shoulders.
3) By removing the dart to the armscye, after having shifted it to the shoulder line.



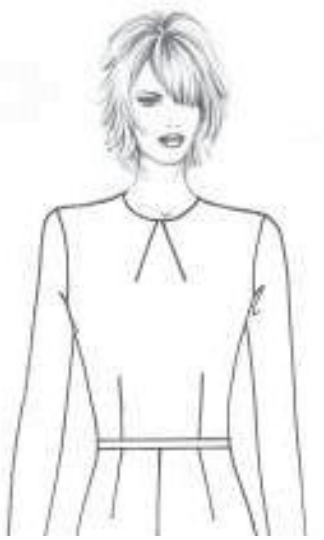
NECKLINE DART ON THE OUTER SHOULDER POINT AND WAIST DART SHIFTED TO THE CENTRE BACK

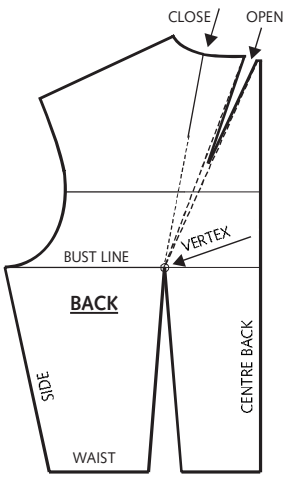


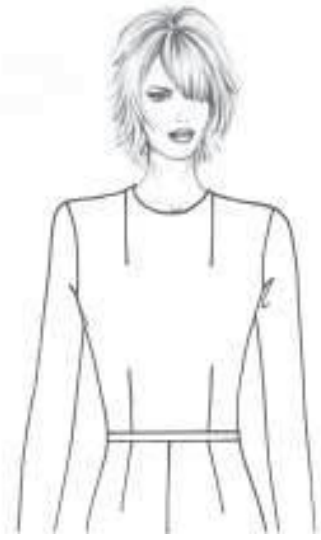
- Extend the side of the neckline dart to where it converges with the tip of the waist dart, on the bust line.
- Draw the line for the new dart in the position desired, on the outer shoulder point.
- Draw the line for the new waist dart shifted to the centre back.
- Slash and pivot the pattern pieces to close the previous dart and open the new one.
- Carefully finish the lines.

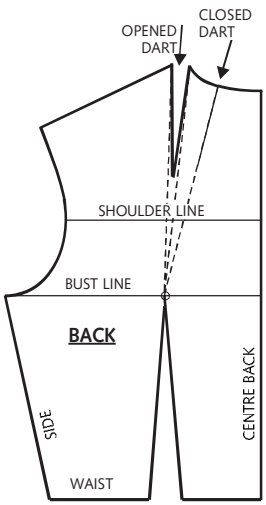


NECK DART MOVED TO CENTRE BACK AND THE SHOULDER POINT

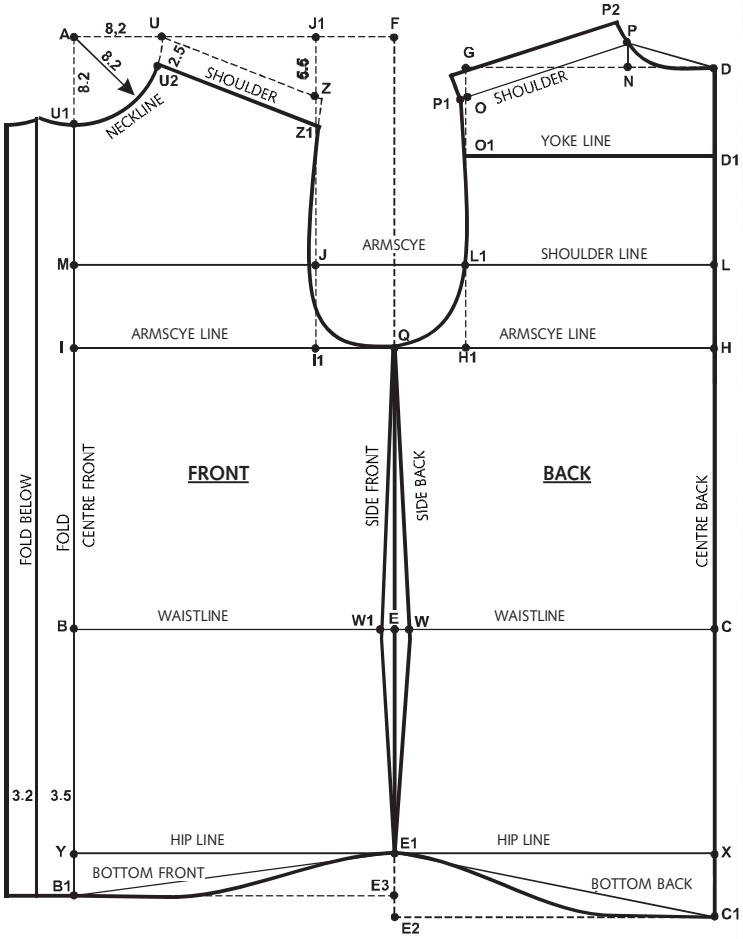




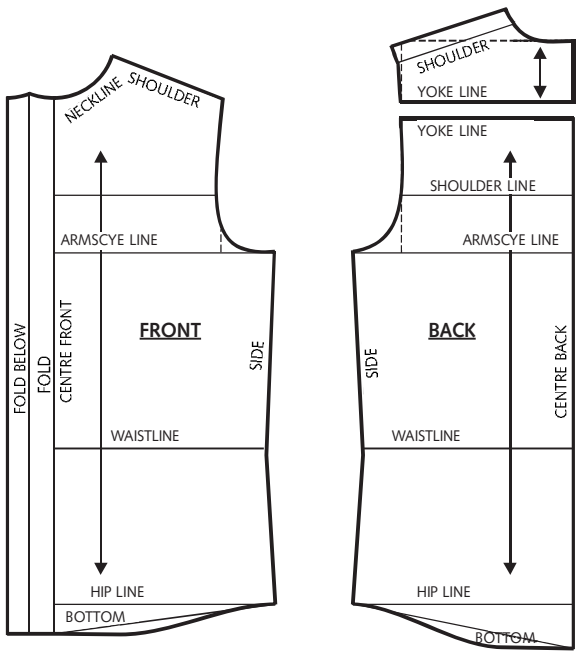




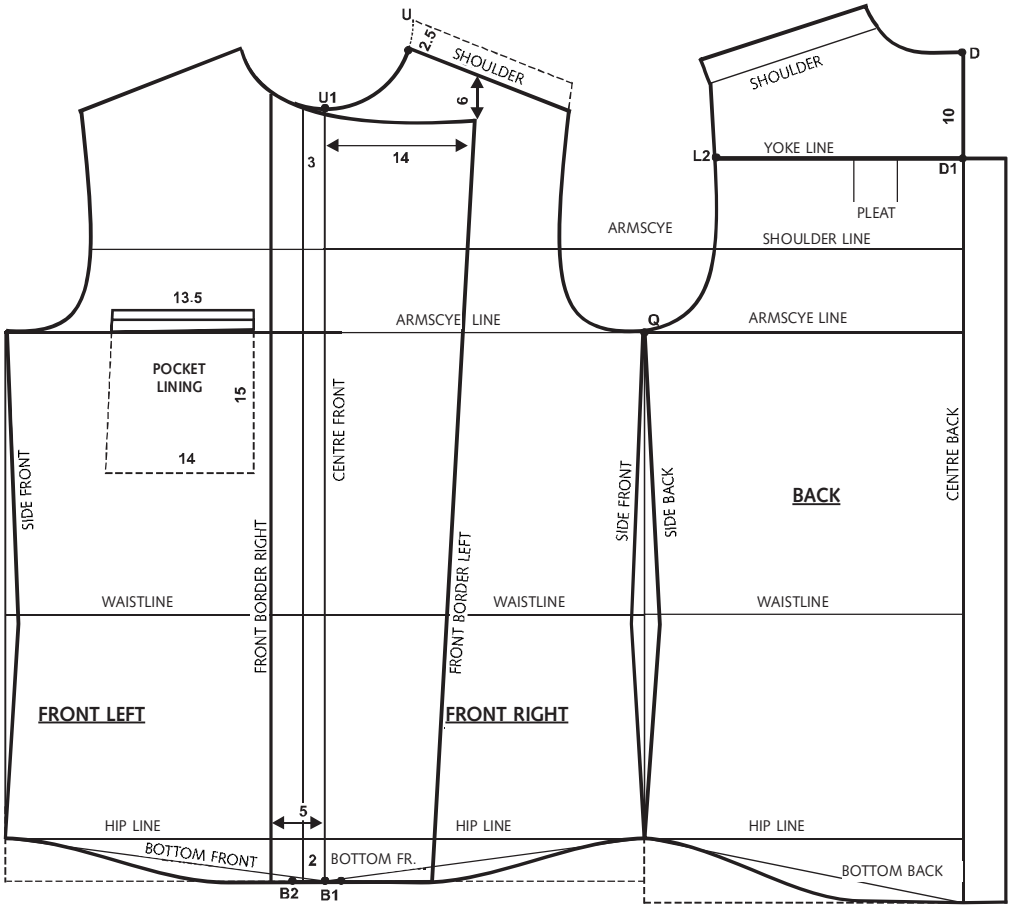
YOKED SHIRT

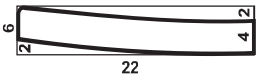


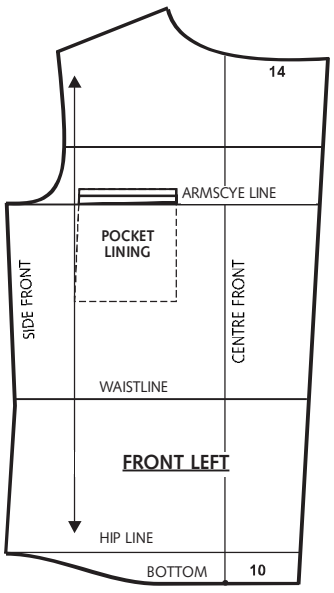
- Draw the basic pattern of the classic shirt.
- D-D1 = 8-10 cm.
- Draw D1-O1. YOKE LINE.
- Cut and divide the parts.

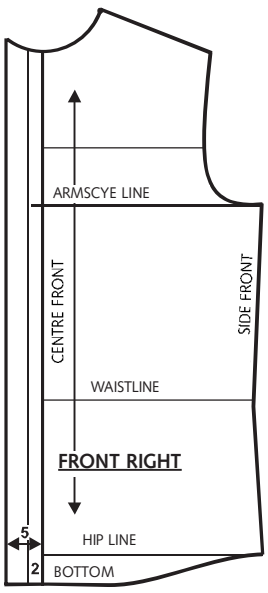


ASYMMETRICAL SHIRT



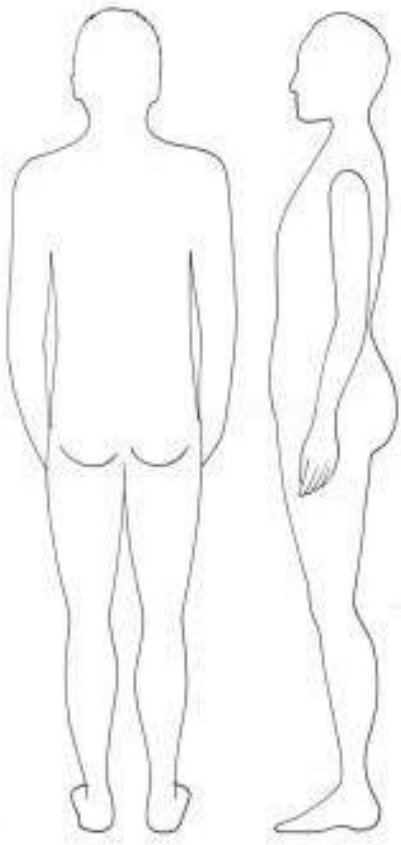






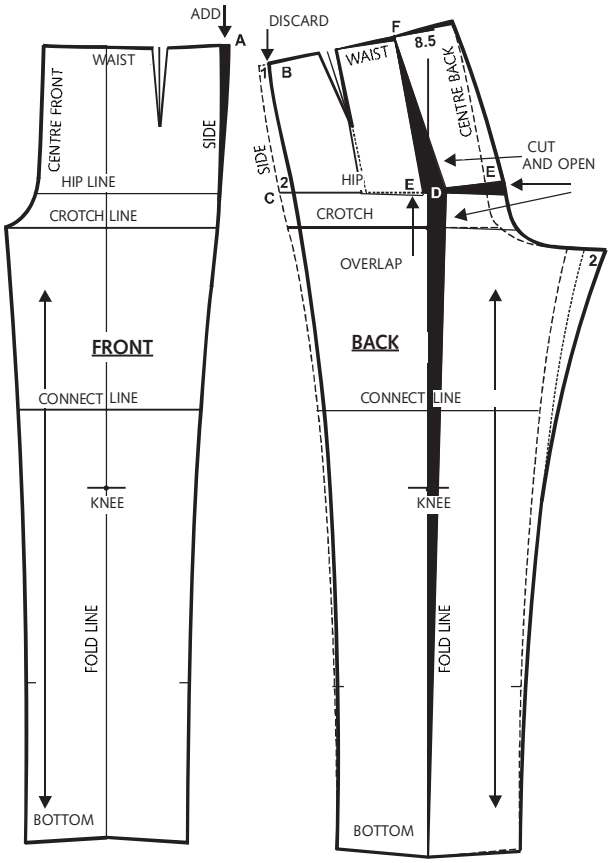
Correction of defects

Narrow hips and protruding bottom

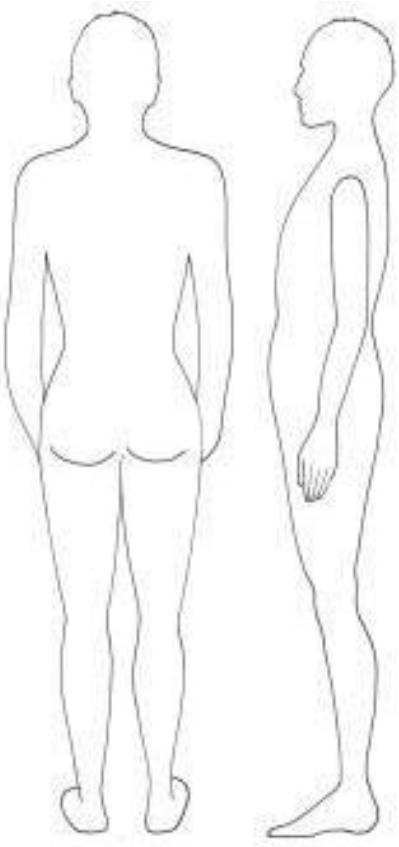


Defects
- Narrow hips 1 cm.
- Protruding bottom 2 cm.

Correction
- 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 and flat bottom



Defects
- Wide hips 1 cm.
- Flat bottom 2 cm.

Correction
- 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.