

SUBJECT NAME:PRINCIPES OF PATTERN MAKING

SUBJECT CODE :FAFT22

UNIT 5

AIMS AND OBJECTIVES

- In this unit we have discussed the rules for layout, types of layout and special layouts.

After reading this unit you should be able to

- Identify which layout is most suitable for cutting the fabric in a most economical manner where fabric wastage should be minimized.

DEFINITION

It is a method of placing the pattern on fabric in the most economical manner to minimize the length of fabric.

RULES IN LAYOUT

1. Press the fabric as well as the pattern pieces flat before laying the pattern on the fabric.
2. Use a large table or any hard flat surface for accommodating your work.
3. If an open layout is used, place the fabric right side up on the table. For all other layouts, fold the fabric right sides facing and wrong sides out.
4. Decide on the best way to fold your cloth. This will depend on the width of the cloth, width of your pattern pieces, the type of cloth and design of the garment (whether left and right halves are identical, whether many pieces have to be cut on fold etc.). The common methods of folding the cloth for laying out pattern pieces are shown under the heading methods of layout (See Fig.12.1).
5. Make a trial layout by keeping weights or two pins per pattern, to make sure that cloth will be sufficient. Rules 6 to 9 must be borne in mind while making the trial layout.

6. Straight grain lines on patterns must be kept parallel to the fabric selvedge. To ensure this, measure and adjust the pattern so that both ends of the straight grain line are the same distance from the selvedge (see the sleeve pattern in Fig.12.1g) and pin the pattern to the fabric along the grain line arrows.

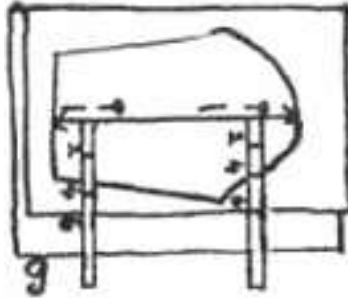


Fig.12.1g

7. Fold lines on the patterns must be kept on folded edges of fabric.

8. Leave enough space between patterns for cutting outward notches and marking seam allowances (if the patterns do not include seam allowances). Also make sure that there is enough material left for cutting out belts, facings, pockets, etc. for which you may not have made paper patterns.

9. The patterns must be placed on the fabric in the most economical way. Some hints on economical pattern placement are given below.

- (a) Try different layouts till you find one that requires minimum length of cloth. Start cutting only after all the pattern pieces are placed.
- (b) Wider end of large pieces should be placed at the cut edges (along one edge or both the edges).
- (c) Lay the pattern pieces close together.
- (d) Place as many pieces as possible near the selvedge ends so that the left-over material will be in one large bit rather than in two or more smaller bits. This will maximise the space available near the folded end for laying patterns that have to be kept on fold.
- (e) As far as possible try to fit the wide end of one piece beside the narrow end of another. (See the petticoat layout shown in Fig.12.1f)
- (f) Fit pieces similar in shape next to each other. This is called dovetailing (See Fig.12.1h).

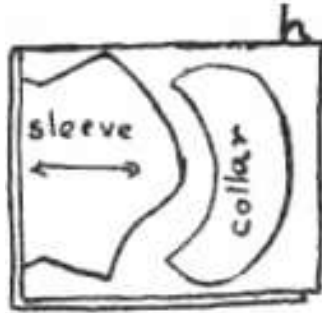


Fig.12.1h

- (g) If pattern pieces to be kept on fold are narrow, fold the material just wide enough to accommodate them (i.e. use off-centre lengthwise fold as in Fig.12.1b). This will leave all the excess material together on one side
- (h) Make duplicates for pattern pieces that have to be used twice and use them for making the trial layout.

10. **Pin patterns to the fabric firmly.** After placement of the patterns has been decided, pin the corners and the long outside edges of the patterns, placing pins close to and approximately perpendicular to the cutting line. Use just enough pins to keep the pattern in position. Too many pins will distort the edges. You should start cutting the fabric only after pinning all the pattern pieces.

11. Take care to use special layouts for asymmetric designs and for fabrics with designs, striped and checked designs, designs going in one direction and fabrics with nap and pile as discussed under the heading special layouts.

METHODS OF LAYOUT

a) **Lengthwise centre fold (Fig.12.1a):** Here the fabric is folded down the middle parallel to the selvages so that the selvages come together. This is the most frequently used fold. The layout for a simple frock on this type of fold is illustrated in the figure,



Fig.12.1a

b) **Off centre lengthwise fold (Fig.12.1b):** This is used when narrow pieces have to be cut on fold. To ensure that the fold is parallel to the selvedge, mark points measuring the

required distance (width of the half pattern including seam allowance) from the selvedge at regular intervals and fold along the markings. The layout for a child's panty on this type of layout is illustrated in the figure.

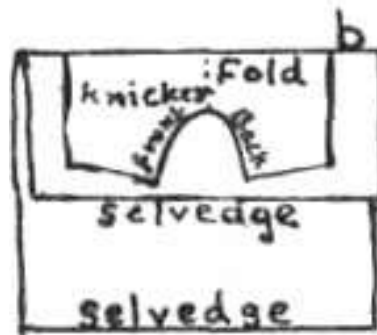


Fig.12.1b

c) Crosswise centre fold (Fig.12.1c): This is suitable for materials that are too narrow to accommodate the width of pattern pieces when folded lengthwise.

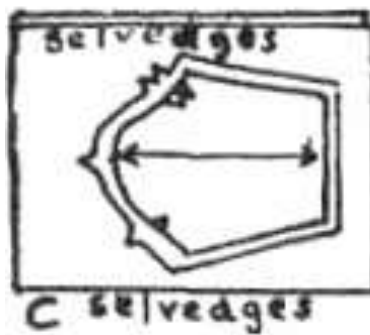


Fig.12.1c

d) Off centre crosswise fold (Fig.12.1d): When only a part of the material is required to cut pattern pieces that are too wide for lengthwise fold layout, this type of fold is used.

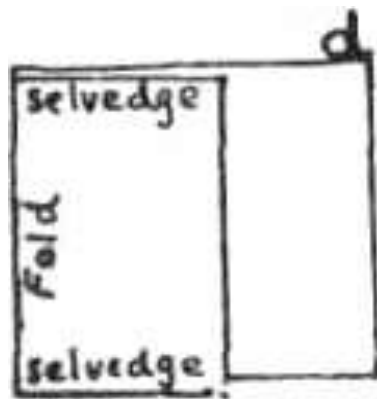


Fig.12.1d

e) **Double fold (Fig.12.1e):** This is used when many pattern pieces that are not too wide must be cut on fold. For garments with no opening for front and back sections, this type of fold can be used provided the cloth is wide enough to accommodate the patterns when folded this way.

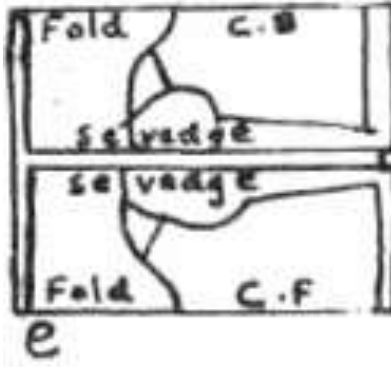


Fig.12.1e

f) **Combination fold (Fig.12.1f):** Here, lengthwise fold and crosswise fold are combined.

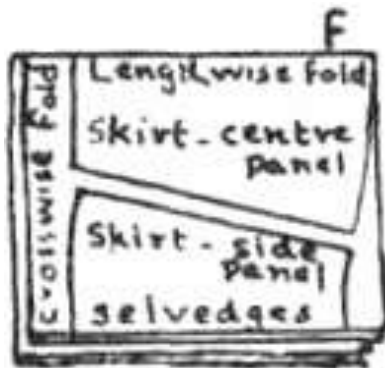


Fig.12.1f

g) **Open layout:** In this type of layout, the fabric is not folded at all. This is used especially for designs which require right and left halves to be cut separately

SPECIAL LAYOUTS

a) **Fabrics with lengthwise striped design (Fig.42a,a₁,b,b₁):** While cutting fabric with bold stripes, adjust the position of the pattern so that one of the prominent lines falls along the centre back of the garment and the remaining strips are identical on the two sides of the fold (See Fig.12.2a₁).

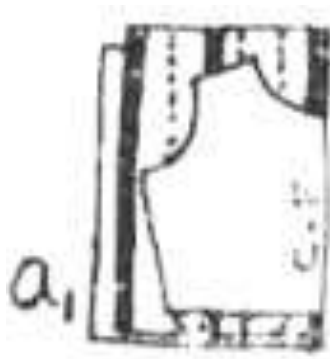


Fig.12.2a₁

Finished appearance of the garment is shown in Fig.12.2a.



Fig.12.2a

Striped material can also be cut on the bias (See Fig.12.2b₁) forming a chevron design (in the shape of the letter V) at the centre front or the centre back seam or opening as shown in Fig.12.2b.

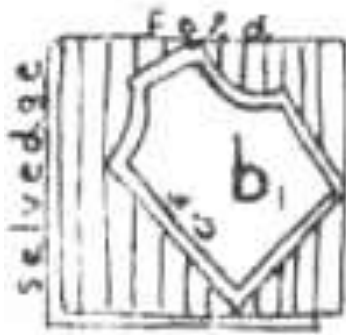


Fig.12.2b₁



Fig.12.2b

b) Fabrics with bold designs such as plaids, and crosswise stripes (Fig.12.2c,c₁): Match plaids and stripes so that they form continuous lines across seam openings (see Fig.12.2c) or meet at equal angles.

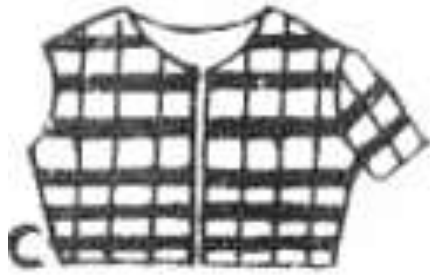


Fig.12.2c

When you fold such fabrics to keep the pattern pieces, make sure that the stripes are matching exactly on both layers of fabric, as in Fig.12.2c₁.

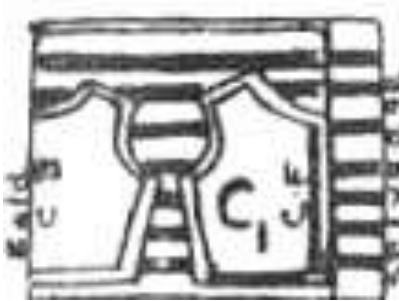


Fig.12.2c₁

If the print is large and spaced or with sweeping curves, drape the fabric on your body and look in the mirror to see where and how the highlighting part of the design should be placed.

c) Asymmetric designs (Fig.12.2d,d₁): These designs call for right and left sides to be cut separately from a single layer of fabric, taking care to see that you are not cutting both the sections for the same side. If the material has no right and wrong side, this problem will not arise. Fig.12.2d shows a blouse with asymmetric design.

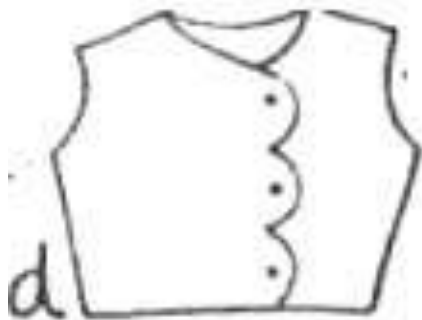


Fig.12.2d

Its layout is displayed in Fig.12.2d₁.

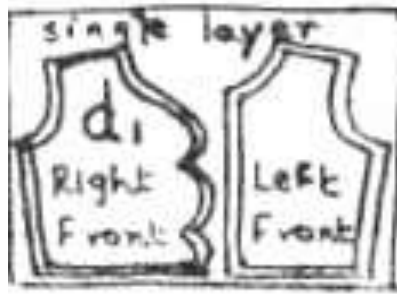


Fig.12.2d₁

d) Fabrics with one way design (Fig.12.2e,e₁): When cutting these fabrics, you must take care to see that all the pattern pieces are arranged in the same correct direction as shown in Fig.12.2e₁.

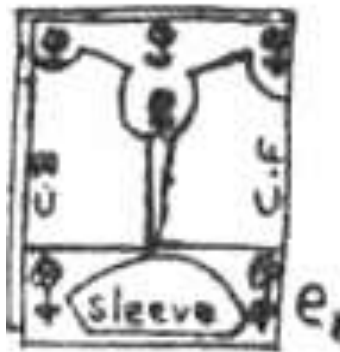


Fig.12.2e₁

The finished appearance will be like in Fig.12.2e. Otherwise the print will look upside down on sections which have been placed wrongly.



Fig.12.2e

e) Fabrics with nap and pile have to be treated like fabrics with one way design.

LET US SUM UP

In this unit, we

- Learnt the rules for pattern layout.
- Discussed the method of layout
- Discussed special layout

LESSON END ACTIVITIES

- The distance education students may try different trails of layout for different styles of different where the fabric consumption should be minimized.

POINTS FOR DISCUSSION

- Analyze suitable layout for a particular kind of garment style.

REFERENCES

- Practical clothing construction, Part I and II, Mary Mathews, Cosmic Press, Chennai (1986).

LESSON – 13: TRANSFERRING PATTERN MARKINGS AND FABRIC CUTTING

CONTENTS

Aims and Objectives
What can be done if cloth is insufficient
Fabric cutting
Transferring pattern markings
Stay stitching and case stitching
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Points for discussion
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AIMS AND OBJECTIVES

- In this unit we have discussed how to transfer pattern markings onto the fabric and fabric cutting.

After reading this unit you should be able to

- Know, what can be done if cloth is insufficient.
- How to transfer pattern markings into fabric.
- Learned fabric cutting

WHAT CAN BE DONE IF CLOTH IS INSUFFICIENT

If cloth is not sufficient, the simplest thing to do is to buy extra fabric. But if it is not available, or you prefer to make do with what you have, the following procedures will help you.

(1) If possible, reduce seam allowances, hem allowances or length and width of some of the pattern pieces. Often you can do this without changing the fit of the garment by reducing fullness (gathers, pleats etc.).

(2) You may decide to cut some pieces on bias or crosswise grain. Some prints may look attractive if the yoke or sleeves are cut on bias or crosswise grain.

(3) Pattern pieces which have to be cut on fold can be cut near selvages and then joined up, with some trimming applied near the seam (eg., box pleat with a harmonising material, faggoting, lace etc) to make it look like an original pattern. You may even find that you end up with an interesting new design (necessity is the mother of invention!).

(4) Use some other material similar in colour and texture to cut parts that are not visible from outside.

(5) You may decide to modify the design of the garment. For example, if you were planning to have a puff sleeve, use a plain sleeve or omit the sleeve.

(6) Certain sections which ought to be cut in one piece may be cut out. in more than one piece and then stitched together if material is otherwise not sufficient. This technique is called piecing. Piecing should be done inconspicuously with design and grain matched- Piecing in solid coloured fabrics is shown in Fig.13.1a and printed fabrics in Fig.13.1b.

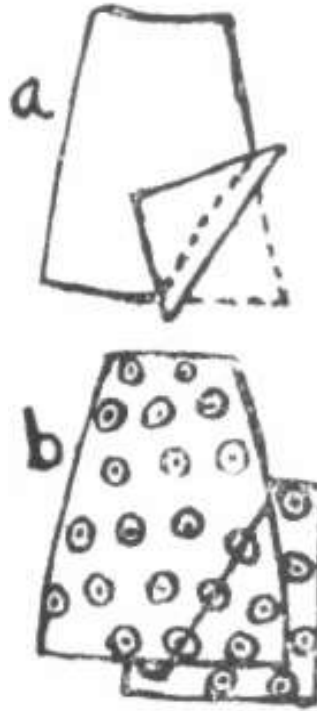


Fig.13.1a,b

FABRIC CUTTING

(1) If the pattern does not have seam allowance, make sure, that you have drawn cutting lines on the fabric leaving enough seam allowance beyond the edge of the pattern before starting to cut the fabric.

(2) Hold the fabric flat on the cutting surface with your left hand, and cut with long even strokes using your right hand.

(3) Walk around the table as you cut because if you move the pattern and material, the grain may shift resulting in uneven edges.

(4) Cut accurately and smoothly exactly along the cutting lines.

(5). Notches should be cut wherever necessary (Fig.13.2). Notches are guides for joining the garment sections. They indicate which edges are seamed together. For example, the front part of the armhole and the front part of the sleeve are marked with two notches, while back part of the sleeve and the armhole are marked with one notch. A notch cut at centre of sleeve helps in matching sleeve centre to shoulder seam of bodice. Notches are usually cut outwards and not into the seam allowance especially if the fabric frays readily or if seam allowance is narrow.

Fig.13.2b shows a sleeve with a single notch (P) cut outwards to a sharp point and a double notch (K) cut outwards with a straight line spanning the width of two notches.



Fig 13.2b

This method of cutting a group of notches as one spanning the width of the notches saves time and effort. Notches may be cut inward as shown in Fig.13.2a, if the fabric is firmly woven and the seam allowance is not too narrow.



Fig.44a

Some prefer to make a short $\frac{1}{4}$ clip or slash to mark notches at beginning and termination points of seam lines, darts etc. on firm, nonravelling fabrics. On ravelling fabrics, some dress makers make a line of basting to mark important notches (Fig.13.2c).



Fig.13.2c

TRANSFERRING PATTERN MARKINGS

After cutting all the pattern pieces accurately you should transfer seam lines and all the pattern markings to the fabric (top layer as well as lower layer).

The common methods employed for marking fabrics are: use of tracing wheel and carbon paper contrasting coloured tailor's chalk, colour pencil and ordinary lead pencil (provided the colour of the fabric is such that the pencil marks will be visible on it), use of pins in combination with pencil or tailor's chalk, use of tailor's tacks etc. Each of these methods has its advantages and disadvantages as can be seen from the detailed explanations given below.

Tracing wheel and carbon paper (Fig.13.3a): This method is not suitable for delicate fabrics which may get spoilt by the sharp teeth of the tracing wheel. Another drawback is that carbon marks (and often smudges too) will be left on cloth and may be visible from the right side, especially if the fabric is transparent or if the carbon paper is of bad quality.

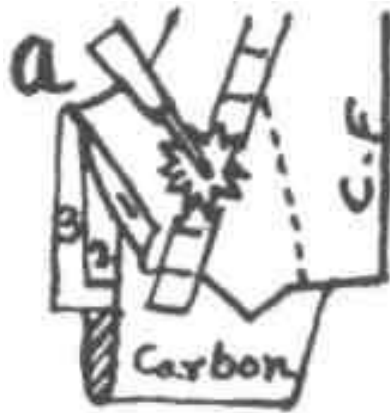


Fig.13.3a

In applying this method, you may use pencil (instead of tracing wheel) with carbon paper, but then you should trace only the ends (and a few points in between) of darts and seams.

If the pattern includes seam allowance and has no slashes or holes provided for facilitating transfer of pattern markings, proceed as follows. For patterns without allowance, follow the procedure explained under Tailor's chalk.

Fold the carbon paper in the middle with the wax sides (sides with carbon) facing. Remove a few pins from a portion of the pattern and slip the folded carbon paper with one side between the lower layer of fabric and the table and the other side between the pattern and the upper layer of fabric. (Be sure to check beforehand that the folded fabric has its right sides facing, and don't make the mistake of inserting carbon between the two layers of fabric). Now the wax sides of the carbon will be facing the wrong sides of the fabric. In Fig.13.3a pattern is labelled as 1, the upper layer of fabric as 2, and the under layer of fabric as 3. Pin the pattern in position again and run the tracing wheel along the seam lines and dart lines of the pattern as shown in the figure. For tracing straight lines, keep ruler

beside the line and run the tracing wheel along it. To avoid spoiling the fabric with carbon marks you may mark just the ends of seam lines, dart lines etc. If you have forgotten to cut notches which should have been cut outwards, mark the position of the notches by a stroke of the tracing wheel perpendicular to the seam line through the centre of the notch.)

Tailor's Chalk: If you have cut slashes or holes or inward notches in the pattern for beginning and termination points of darts and seams (or if you have not left seam allowance in the pattern), you can mark directly on to the top layer of fabric with tailor's chalk or ordinary pencil. Marks on the top layer can be transferred to the under layer of fabric by placing a carbon paper under it with wax face up, and using a tracing wheel; it can also be done with the help of pins as explained below

Common pins (Fig.13.3b): Markings on the top layer of fabric can be transferred to the lower layer by inserting pins through both layers of fabric at the points to be marked. As soon as one pin is inserted, turn the fabric and mark the pin point on the underside with chalk or pencil marks. After completing all the markings necessary remove the pattern and connect the chalk or pencil marks. (Use a ruler for straight lines). If the pattern has seam allowance and no holes or slashes near darts and seam lines, pins can be inserted through the pattern and double layer of fabric and the pattern lifted to mark the pin points on upper layer of fabrics.



Fig.13.3b

Tailor's tacks (Fig.13.3c,c₁,d): This method is especially good for silks and sheer fabrics. Unlike the other two methods it has the advantage that no pencil or carbon marks will be left on the fabric. The tacks should be worked using double thread of a contrasting colour so that they can be easily seen.

Working of continuous tailor's tacking (Fig.13.3c,c₁): If the pattern includes seam allowance and it has no slashes or holes provided for facilitating transfer of pattern markings, tailor's tacking is done as follows (See Fig.13.3c).

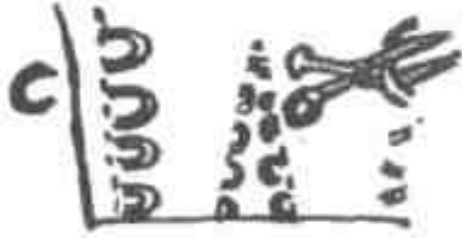


Fig13.3c

Tack through the pattern and double layer of fabric along the seam lines and dart markings using uneven stitches of $\frac{1}{2}$ " length on 1 upper side and $\frac{1}{4}$ " length on under side. While making the stitches on the upper side do not pull them tight, instead leave them as loops of $\frac{1}{4}$ " height.

After completing the tacking, cut each loop along the midpoint as shown (Fig.13.3c). Unpin the pattern from the fabric and remove it carefully, making sure that the threads do not get pulled out of the fabric. Now raise the upper layer of fabric slightly and clip the threads between it and the bottom layer, so that thread tufts will be remaining on both layers of fabric (Fig.13.3c₁).



Fig.13.3c₁

Note: If the pattern has no seam allowance, tailor's tacking will be done through double layer of fabric just along the edge of the pattern without catching the pattern

Working of single tailor's tacks (Fig.13.3d): If you have provided holes or slashes at ends of seam lines, darts etc., you can work this type of tacking stitch. Fig.13.3d shows a dart with three holes cut in it (two holes at the base of the dart and one hole at the tip of the dart) to facilitate transfer of pattern markings. Through each of these holes, single tailor's tacking has been worked as follows. At the point to be marked, take a small stitch through the slash in the pattern, catching the double thickness of fabric and leaving a thread end of V length on the upper side. Work a back stitch in the same place and leave a loop of $\frac{1}{2}$ " height. Clip the thread, leaving a $\frac{3}{4}$ " thread end. After completing the tailor's tacks, unpin the pattern from the fabric and remove it gently. Now lift the upper layer of fabric and clip the threads between it and the bottom layer.



Fig.13.3d

Removing the pattern

After the fabric is marked completely, remove the paper patterns carefully and put them safely back in a cover.

STAY STITCHING AND CASE STITCHING

Stay stitching is a row of regulation machine stitching (stitch of normal length) using matching thread, done on a single thickness of fabric between the cut edge and the seam line, about 1/16" from the latter. Stay stitching helps to preserve the lines and grain of the fabric as cut by the pattern. It prevents curved edges like neckline, armhole etc. and bias edges like side seams from stretching and going out of shape. Stay stitching is also used for reinforcement at curves and corners to be slashed later in construction.

For slippery fabrics and fabrics which pucker, tack a tissue paper behind the fabric and stitch through the fabric and tissue paper. Stay stitching should be done with the grain. In Fig.13.4b the direction for stay stitching on a blouse front is indicated by small arrow heads drawn near the seam lines.



Fig.13.4b

EASE STITCHING

Ease stitching is done instead of stay stitching where a little extra fullness is needed as in a sleeve cap. For ease stitching you may use a standard size stitch with loose upper tension or a slightly longer stitch than normal stitch. Some times if the neckline is loose, ease stitching is done around it so that thread can be pulled to form small gathers, thus shortening the neckline. Always the under thread should be pulled for gathering and for this reason the bobbin thread should be strong. Also the upper tension should be looser than the under tension.

Note: On firmly woven fabrics, you need not do stay stitching on most seams. However, stay stitching must be done on neckline as soon as the garment is cut out. If you do not do this, you will have a lot of trouble adjusting the collar to fit the neckline or you may end up with a loose gaping neckline.

Advantages

1. Material will not go waste, since we can design according to the material.
2. Once it is draped it is easy to cut.
3. Correct exact fitting is possible.
4. No measurements should not taken often, for a particular person.