DRESS MAKING

TRADE PRACTICAL

NSQF LEVEL - 3.5

VOLUME - 2

HANDBOOK FOR CRAFTS INSTRUCTOR TRAINING SCHEME

Directorate General of Training

DIRECTORATE GENERAL OF TRAINING
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
GOVERNMENT OF INDIA

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A Comprehensive Training Program
under Crafts Instructor Training Scheme (CITS)
for Instructors

HANDBOOK ON TECHNICAL INSTRUCTOR TRAINING MODULES

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सचिव

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Secretary

सत्यमेव जयते

भारत सरकार
कौशल विकास एवं उद्यमिता मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
AND ENTREPRENEURSHIP

Foreword

In today's rapidly evolving world, the role of skilled craftsmen and women is more crucial than ever. The Craft Instructor Training Scheme (CITS) stands at the forefront of this transformation, shaping the educators who will train the next generation of artisans and technicians. This book aims to provide an in-depth understanding of the subject, exploring its significance, methodologies, and impact on vocational training.

The Craft Instructor Training Scheme was established with the objective of enhancing the quality of instruction in industrial training institutes and other vocational training institutions. By equipping instructors with advanced skills and knowledge, the scheme ensures that they are well-prepared to impart high-quality training to their students. This, in turn, contributes to the creation of a highly skilled workforce capable of meeting the demands of modern industry.

The initial chapters provide the importance of specialized instructor training. Following this, detailed chapters delve into the curriculum covering advanced techniques, safety protocols, and instructional strategies. Each section is designed to offer both theoretical insights and practical applications, ensuring a well-rounded understanding of the subject.

The book offers recommendations for overcoming obstacles and enhancing the effectiveness of the program, with the ultimate goal of producing highly skilled instructors capable of shaping the future workforce.

This book is intended for a diverse audience, including current and aspiring instructors, vocational training administrators, policymakers, and industry stakeholders. It serves as a valuable resource for understanding the intricacies of the subject and its pivotal role in vocational education.

I extend my heartfelt gratitude to all contributors who have shared their experiences and expertise, enriching this book with their valuable insights. Special thanks to the contribution of the development team, reviewers and NIMI that have supported this endeavor, providing essential data and resources.

It is my sincere hope that this book will inspire and guide readers in their efforts to enhance vocational training, ultimately contributing to the development of a skilled and competent workforce.

ATUL KUMAR TIWARI, I.A.S.
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त्रिशलजीत सेठी
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GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

FOREWORD

The Craftsmen Training Scheme (CTS) implemented by the Directorate General of Training (DGT) provides skill training to the youth and ensures a steady flow of skilled manpower for the industry. It aims to raise quantitatively and qualitatively the industrial production by systematic training, and to reduce unemployment among the youth by providing them with employable skills.

The Craft Instructor Training Scheme (CITS) is an indispensable part of the Craftsmen Training Scheme (CTS). It offers comprehensive training both in 'skills' and in 'training methodology' to the instructor trainees to make them conversant with techniques of transferring hands-on skills.

I congratulate NIMI for taking the initiative of preparation of the course content for CITS. This will help institutionalize the mechanism for imparting training to the trainers all across the ecosystem. I also extend my gratitude to the Instructors and Officials of National Skill Training Institutes (NSTIs) and the DGT for their invaluable contribution in preparation of the CITS course content.

As we navigate the complexities of a rapidly changing world and the technological disruptions, the significance of CTS and CITS has increased manifold. It not only empowers individuals with practical skills but also lays the foundation for a prosperous future. I am confident that this book will serve as a guiding light to all instructor trainees for skill development and nation-building.

Trishaljit

(Trishaljit Sethi)

PREFACE

The Craft Instructor Training Scheme is an indispensable module of the Craftsmen Training Scheme, which has been an integral part of the Indian skill development industry since its inception. This program aims to equip instructors with the necessary skills and teaching methodology to effectively transfer hands-on skills to trainees and promote a holistic learning experience. The first Craft Instructor Training Institute was established in 1948, followed by six more institutes across India in 1960. Today, these institutes, including the National Skill Training Institute (formerly Central Training Institute for Instructors), offer the CITS course, which is mandated by the Directorate General of Training (DGT).

The Craft Instructor training program is designed to develop skilled manpower for industries. The course aims to offer instructors an opportunity to improve their instructional skills, engage learners effectively, offer impactful mentoring, and make efficient use of resources, leading to a more skilled workforce in various industries. The program emphasizes collaborative and innovative approaches to teaching, resulting in high-quality course delivery. Overall, the Craft Instructor Training Scheme is a pivotal program that helps instructors grow in their careers and make a significant contribution to society. This program is essential for developing skilled manpower and promoting a robust learning environment that benefits both trainees and instructors alike.

ACKNOWLEDGEMENT

National Instructional Media Institute (NIMI) sincerely acknowledges with thanks for the co-operation and contribution extended by the following experts to bring out this Instructional material **(Trade Practical)** for **CITS Dress Making (Volume - II of II) (NSQF Level - 3.5)** under the **Apparel** Sector for **Instructors**.

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NIMI records its appreciation of the Data Entry, CAD, DTP Operators for their excellent and devoted services in the process of development of this Instructional Material.

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NIMI is grateful to all others who have directly or indirectly helped in developing this IMP.

ABOUT THE TEXT BOOK

The Vocational Instructor Training Program is a comprehensive initiative designed to equip aspiring students with the necessary skills and knowledge to effectively teach in vocational education settings. This program encompasses a range of pedagogical strategies, instructional techniques, and subject-specific content tailored to the diverse vocational fields. Participants engage in coursework that covers curriculum development, assessment methods, classroom management, and the integration of industry-relevant technologies. Practical experience and hands-on training are emphasized, allowing participants to apply theoretical concepts in real-world teaching environments. Through collaborative learning experiences and mentorship opportunities, aspiring vocational instructors develop the confidence and competence to facilitate engaging and impactful learning experiences for their students. This training program aims to cultivate a new generation of educators who are not only proficient in their respective vocational fields but also adept at fostering the success and employability of their students in today's competitive workforce.

This text book covers communication, self-management, information and communication technology, entrepreneurial and green skills. It has been developed as per the learning outcome-based curriculum.

G C Rama Murthy,
Joint Director,
Curriculum Development, DGT,
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CONTENT

SOFTWARE - 2
(8 - 29)

EXERCISE 8 - 29 : Identify the pattern making tools

Objectives

At the end of this exercise, you shall be able to:

- start the CAD program
- identify the pattern making tools.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.
- 1 feet scale - 1 No.

Materials

- White Sheet - 1 No.
- HB Pencil - 1 No.
- Pencil eraser - 1 No.

Procedure

TASK 1: **Start the program**

1 Double click the icon PATTERN CAD on the desk top*

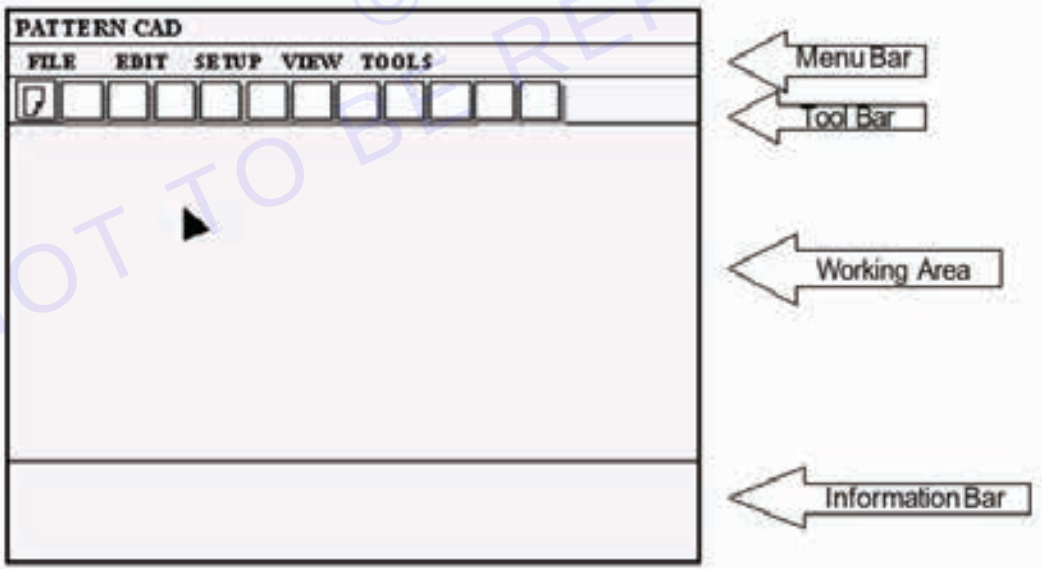
OR

Choose all programme > CAD> from the start menu.

— — — — —

TASK 2: **Identify the pattern making tools**

1 Move the mouse pointer at the top of each tool in the tool bar.



2 Identify the name of the tool and it's icon.

3 Prepare the following identification chart in a white sheet using scale and pencil.

4 Write the name of each tool in the "Name of the tool" column.

5 Draw the symbol of each icon of the particular tool in the "symbol" column.

Note: Get the work checked by your Instructor

Identification chart for making tools

S.No.	Name of the Tool	Symbol
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Create a CAD file

Objectives : At the end of this exercise, you will be able to:

- start the CAD program
- create a new CAD file
- save the file.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

TASK 1: **Start the CAD program**

1 Double click the icon PATTERN CAD on the desk top*

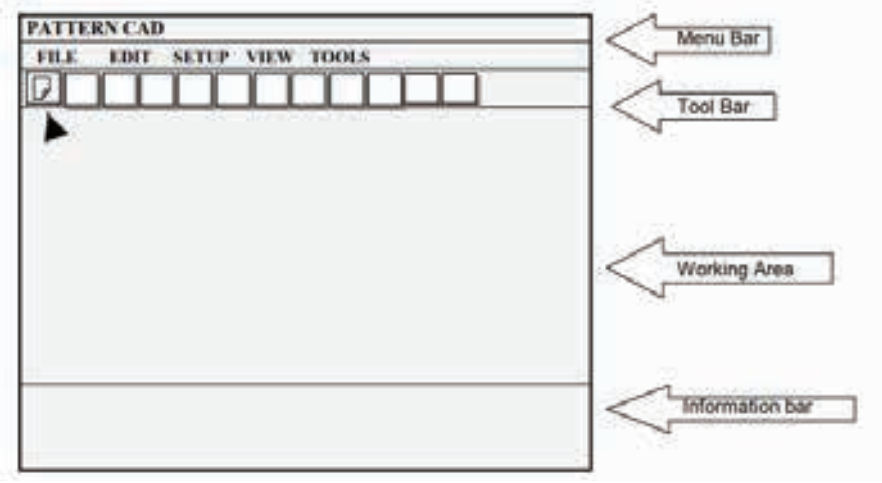
OR

Choose all programme > CAD> from the start menu.

— — — — —

TASK 2: **Create a CAD file**

1 Click icon New in the tool bar.



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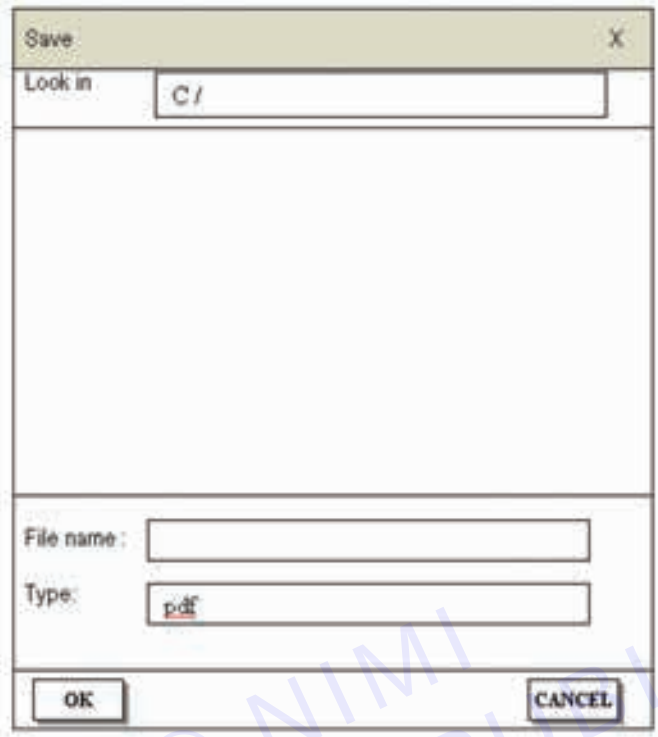
TASK 3: **Save the file**

1 Select Save from the FILE in the menu bar

2 Enter the file name.

3 Click OK.



Construct lines using CAD

Objectives : At the end of this exercise, you shall be able to:

- create a CAD file
- create normal line, Horizontal line and vertical line
- create parallel line and perpendicular line.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

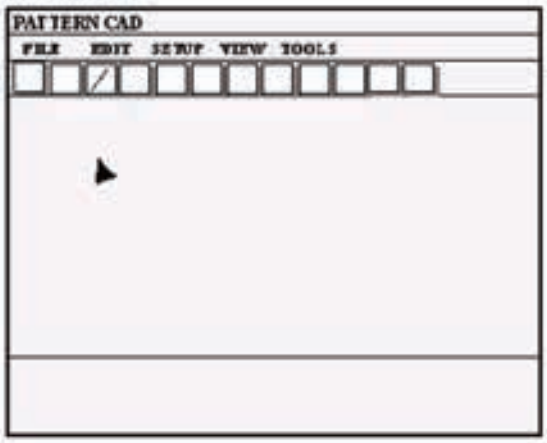
TASK 1: **Create a CAD file**

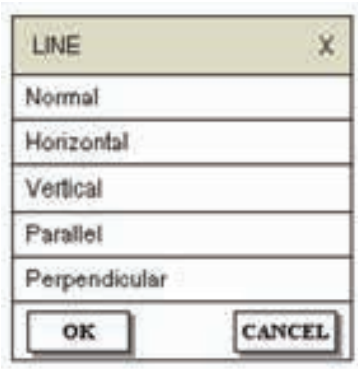
1 Refer Create a CAD file. (Task 2)

TASK 2: **create normal line, horizontal line and vertical line**

1 Click create line icon  in the toolbar.

2 Select normal line in the line dialog box .

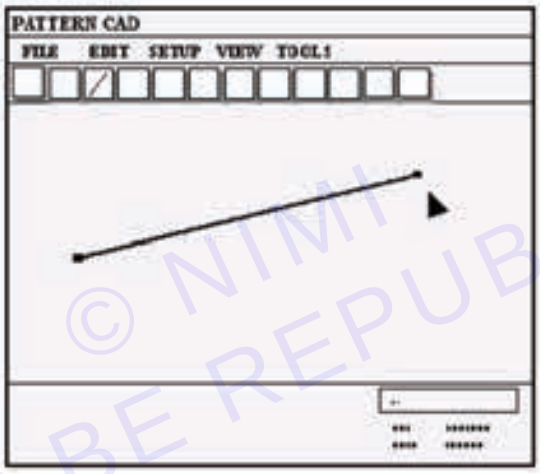




3 Click OK

4 Click at the location of starting point of the line in the working area.

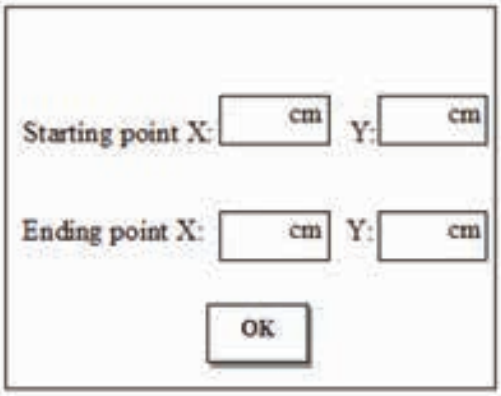
5 Click at the location of ending point of the line in the working area.



6 Construct horizontal and vertical line also by following the same above procedure.

*Note

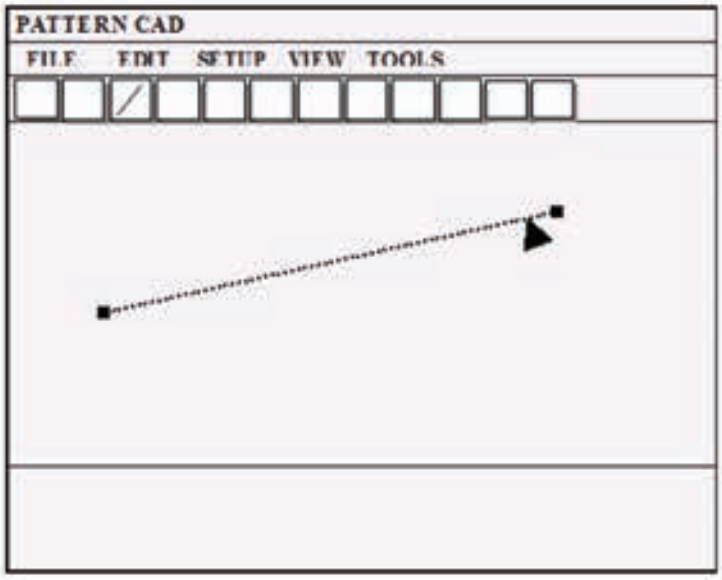
To specify the dimensions of line enter the values in dialog box of information bar and click ok



TASK 3: **create parallel line and perpendicular line**

1 Create a line.

2 Select the line on the working line area

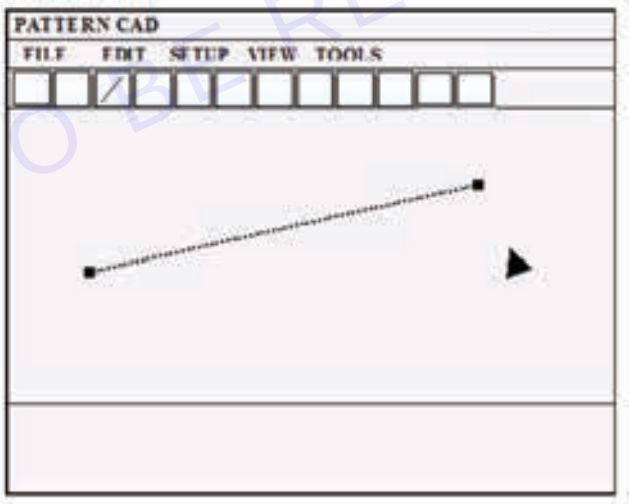


3 Click create line icon in the toolbar

4 Select parallel line in the line dialog box.

5 Click OK.

6 Click and drag the line on the working area to construct a line parallel to the selected line.

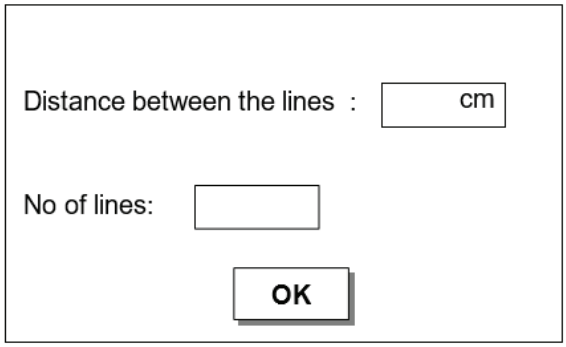


7 Save the file with suitable file name.

8 Construct perpendicular line also by following the same above procedure.

***Note**

To specify the dimensions of line enter the values in dialog box of information bar and click 0k



Create a curve

Objectives : At the end of this exercise, you shall be able to:

- create a normal curve
- create a dimensional curve
- create a 3 point curve
- create a 4 point curve.

Requirements

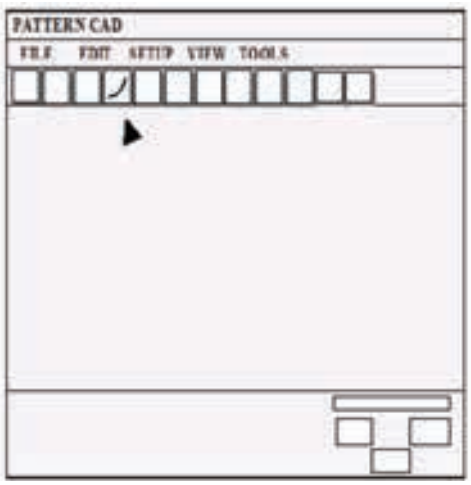
Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

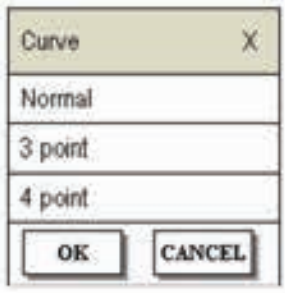
Procedure

TASK 1: **Create a normal curve**

1 Click curve icon in the tool bar.

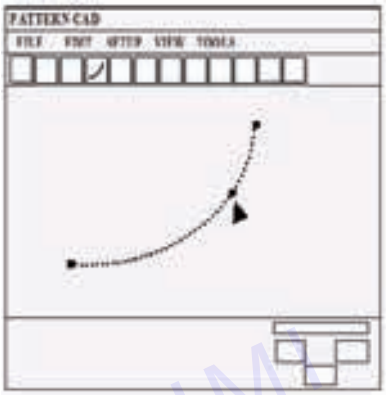


2 Select normal in the Curve dialog box.



3 Create a line by clicking two or three points on the working area.

4 Click anywhere on the line and drag the point to form a curve.



TASK 2 : **Create a dimensional curve**

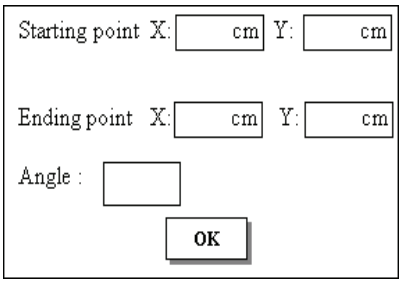
1 Click curve icon in the tool bar.

2 Select normal in the Curve dialog box.

3 Create a line by clicking two points on the working area.

4 Enter the values in dialog box of information bar to specify the dimensions of curve.

5 Click O.K.

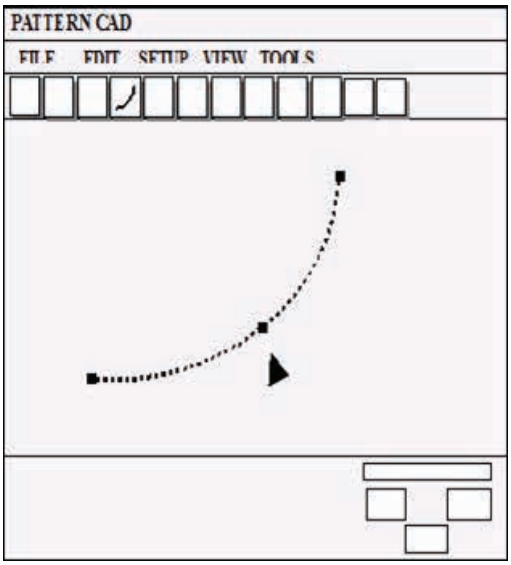


TASK 3 : **Create a 3 point curve**

1 Click curve icon in the tool bar.

2 Select 3 point in the Curve dialog box

3 Click three points on the working area, with its third point lying in between the first two points.



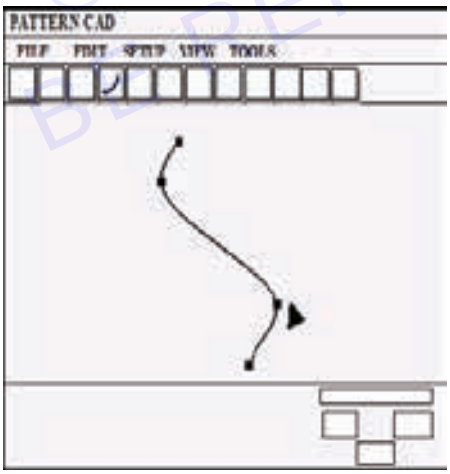
TASK 4 : **Create a 4 point curve**

1 Click curve icon in the tool bar

2 Select 4 point in the Curve dialog box

3 Click 4 points on working area with its third and fourth point lying in between the first two points.

4 Save the file with a suitable file name.



Create a Rectangle

Objectives : At the end of this exercise, you shall be able to:

- create a rectangle
- create rectangles with different measurements.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

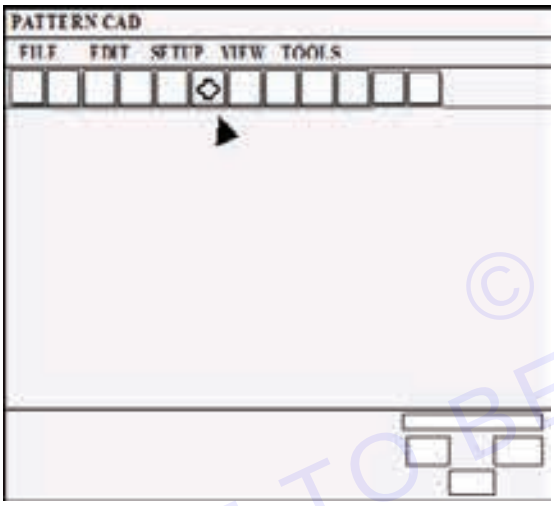
Procedure

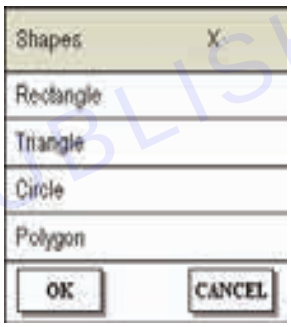
TASK 1: **Create a rectangle**

1 Open the Pattern CAD software.

2 Click shape icon on the tool bar.

3 Select the shape rectangel from the dialog box

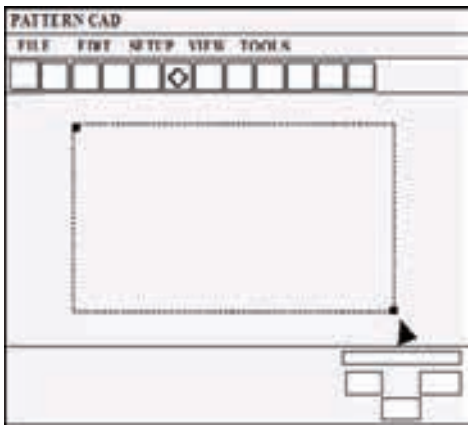




4 Click on the working area to define the first point of the rectangle.

5 Click and drag the end point.

6 Enter the values in the information bar to form the di- mensional shapes.



TASK 2 : **Create rectangles with different measurements.**

1 Create rectangles with different measurements. (Refer Task 1).

Create pattern for a Bodice Block Front

Objectives : At the end of this exercise, you shall be able to:

- create pattern for a bodice block front.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

TASK 1: **Create pattern for a Bodice Block Front**

1 Collect the required measurements for a Bodice Block Front.

Waist length	=	41 Cms.
Bust	=	88 Cms. + 6 Cms. for Ease
Waist	=	70 Cms. + 4 Cms. for Ease
Shoulder	=	34 Cms.
Armhole Depth	=	22 Cms.
Neck	=	38 Cms.+ 2 Cms. for Ease

2 Double click the icon PATTERN CAD on the desk top OR
Choose all programs > CAD > from the start menu. (Fig 1)

3 Select options in the menu bar. Select “Cms.” as unit.

4 Go to File and click new.

5 Give the name of the pattern.

6 Create a Rectangle of 41 cms,. length (for Waist Length) and 23.5 Cms. (1/4 Bust + 1.5 Cms. for ease) width.

7 Name the corner points of the rectangle from 1 to 4 as shown in the Fig 2.

Fig 1

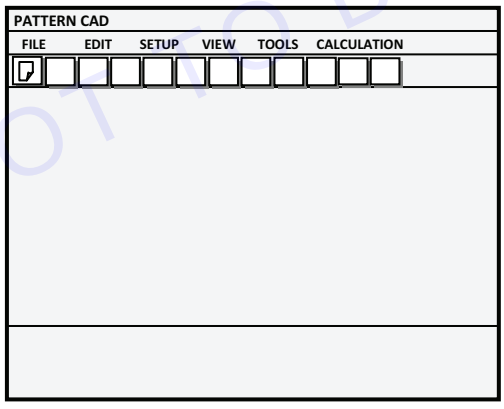
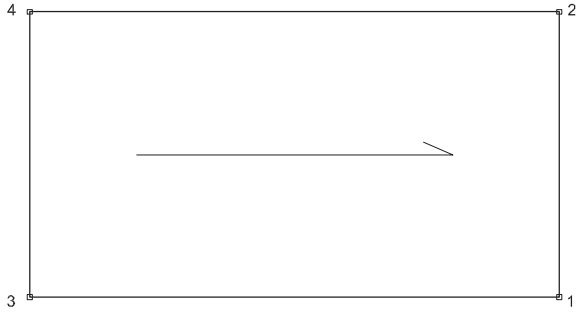


Fig 2



FDC22P0027

8 Select point tools and mark the points 5,6,7 & 8 as follows. (Fig 3)

1-5 = 7.5 Cms., (one fifth of neck with ease measurement minus 0.5 Cm.).

1-6 = 8 Cms (one fifth of neck with ease measurement).

1-7 = 17.5 Cms.(Half Shoulder+o.5 cm for ease) 2-8 = 22 Cms.,Arm Hole depth.

9 Pick the selection tools and click the points 1 & 2 and press del button. (Fig 4)

Fig 3

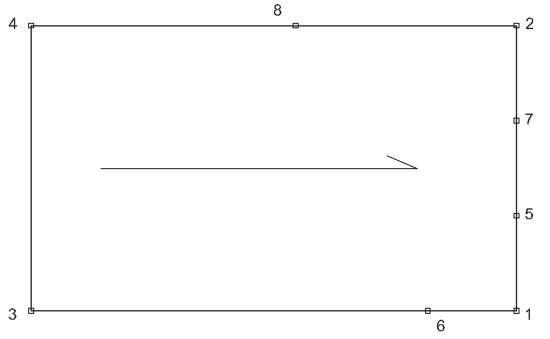
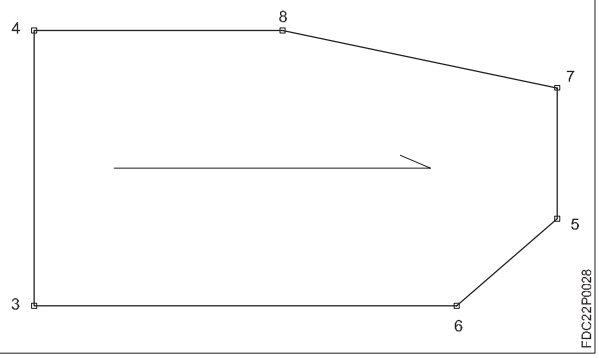


Fig 4



10 Use move point tool and move the point 7 straight to- wards bottom portion with a distance of 5 Cms. for shoulder slope. (Fig 5)

11 Mark points 9 & 10 on the lines 5-6 &7-8 respectively. Give the point type as “curve” in the dialog box. (Fig 6)

Fig 5

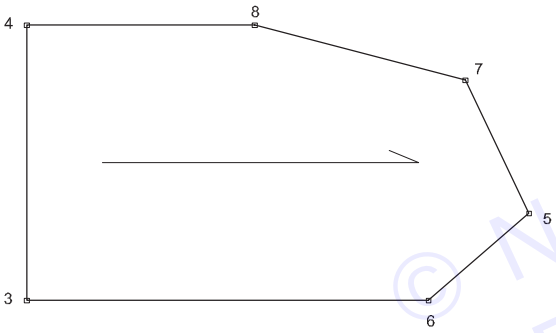
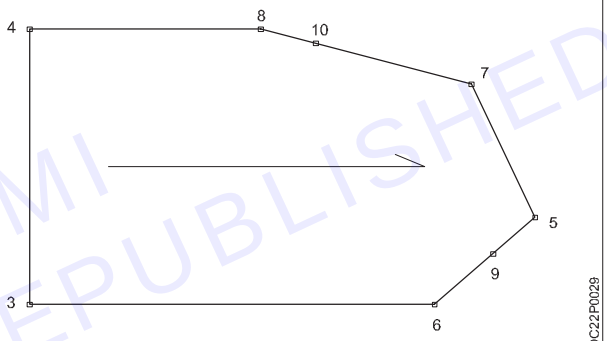


Fig 6



12 Move the points 9 & 0 with the help of move point tool and make smooth neck and armhole curves. (Fig 7)

13 Mark point from 3 with a distance of 13 Cms. for dart placement. (Fig 8)

Fig 7

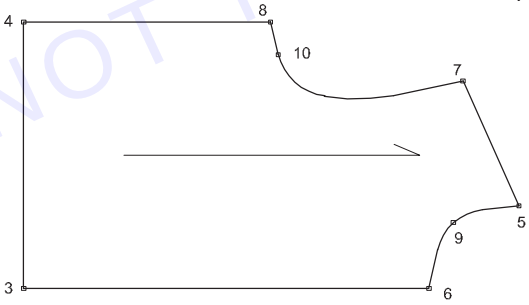
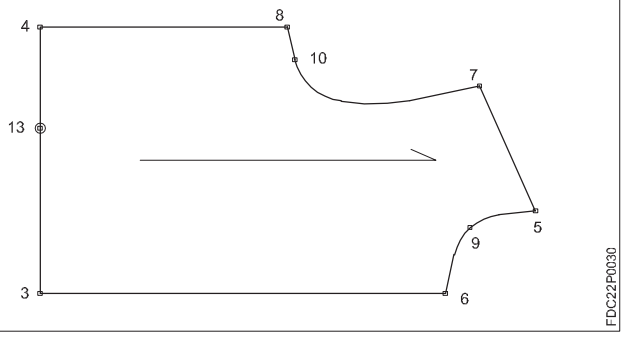


Fig 8



14 Move the point 13 straightly towards bottom side with the distance of 1 Cm. (Fig 9)

15 Move the point 4 towards point 8 straight with a distance of 3 cms., with the help of the move point tool. (Fig 10)

16 Move the point 4 sideways straight with the distance of 2 cms., with the help of the move point tool

17 Check the measurement of 3-13 plus 13-4 using measuring tool. It should be equal to 24.5 Cms.(1/4 waist + 1 cm for ease + 6 cms. for dart). (Fig 11)

18 Mark points 14 & 15 for dart intake each having 3 Cms., distance from point 13. (Fig 12)

Fig 9

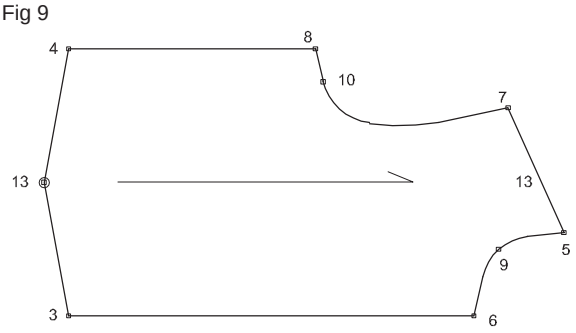
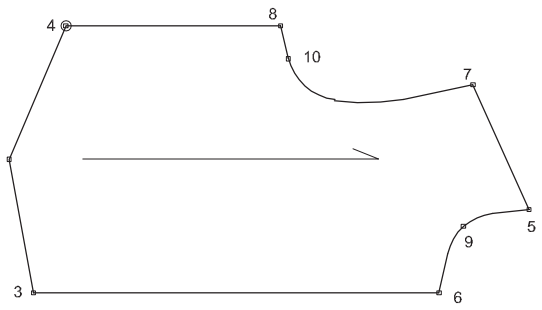


Fig 10



FDC22P0031

Fig 11

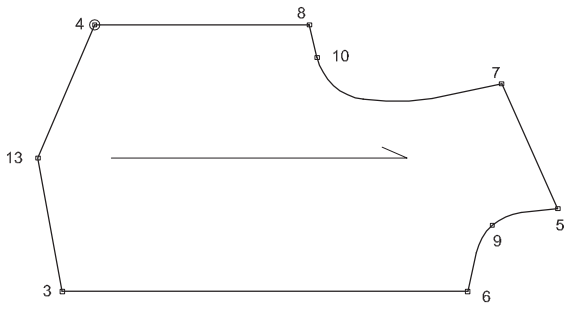
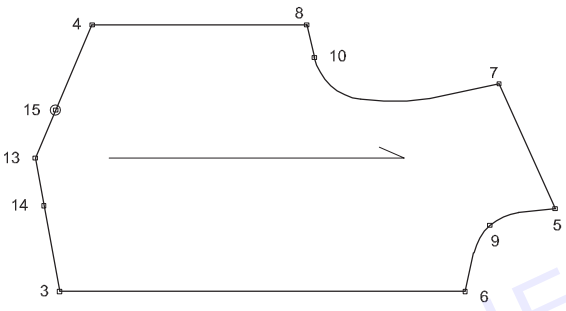


Fig 12



FDC22P0032

19 Select dart tool.Pick first point 14 and second point Enter the dart length as 15 Cms. in the dialog box. (Fig 13)

20 Mark curve points 16 & 17 on the lines 3-14 & 15-4 as smooth curves with the help of move point tool. (Fig 14)

Fig 13

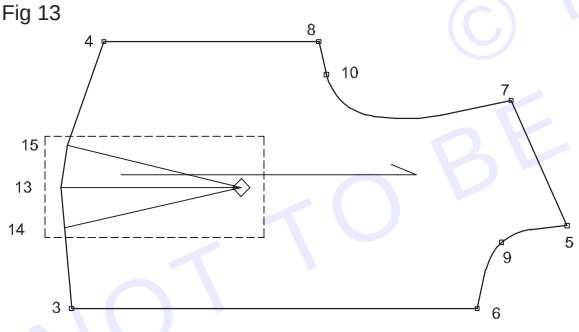
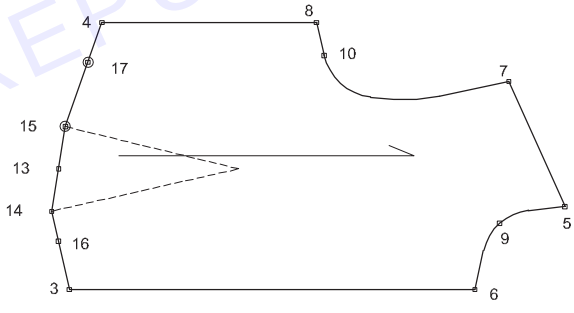


Fig 14



FDC22P0033

21 Modify the lines 3-14 & 15-4 as smooth curves with the help of move point tool. (Fig 15)

22 Select notch tool place the notches at the armhole. (Fig 16)

23 Save the file in the proper folder

Note: Get the work checked by your Instructor.

Fig 15

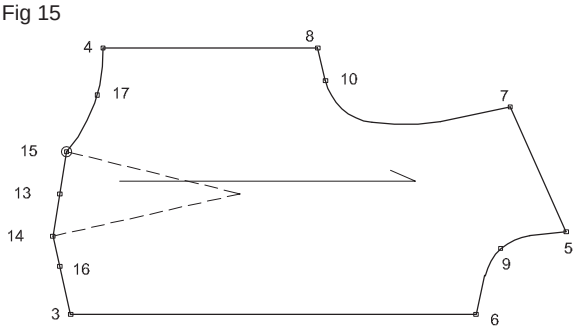
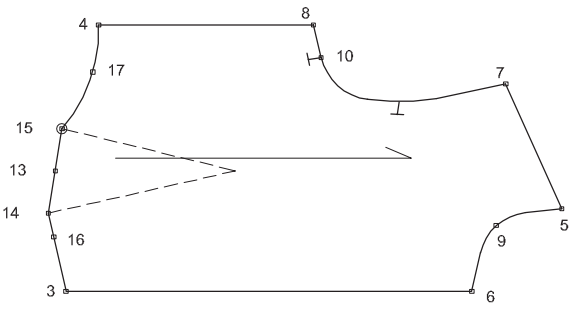


Fig 16



FDC22P0034

Practice Dart Tools

Objectives : At the end of this exercise, you shall be able to:

- open a dart
- create a multi darts
- close a dart
- remove a dart.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

TASK 1: **Open a dart**

1 Open the Bodice Block Front pattern that saved in the file menu of PATTERN CAD.

2 Create a point 'P' at the mid level of the shoulder. (Fig 1)

Note: select the point where the fullness starts (the point where the slashing will begin).

3 Select Open Dart from the Darts menu.

4 Enter the amount of fullness to add in the dialog box. Enter Distance = 1 & Angle = 2.1.

Depth of dark=10

5 Click OK. (Fig 2)

Fig 1

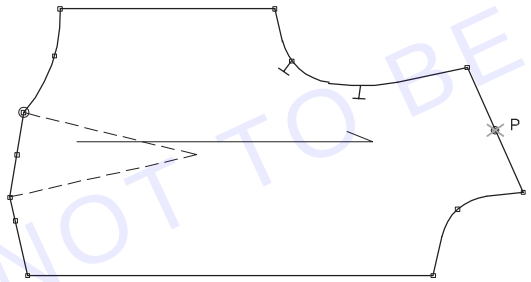
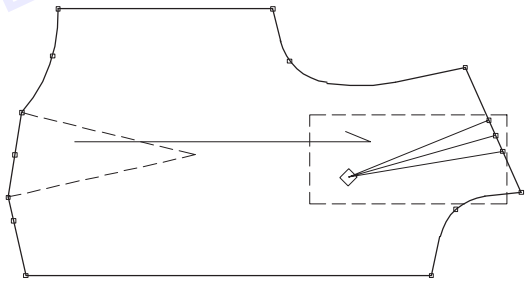


Fig 2



TASK 2: **Create multi darts**

1 Open a Bodice Block Front pattern.

2 Click and drag to the points A to B (Neck curve) on the pattern, where the multi darts are to be created. (Fig 1)

3 Select Open Multiple Dart from the Darts Menu or Darts Toolbar.

4 Enter the desired multiple dart information in the dialog box. (Fig.6). Enter no. of Dart = 3, Width of First and last dart = 0.5 Cms., Depth of First and last dart = 4 Cms., and angle = 0.

5 Click O.K. (Fig 2)

Note: The darts will be created on the first and last selected points. If more than 2 darts are created, they will be equally distributed between the points.

Fig 1

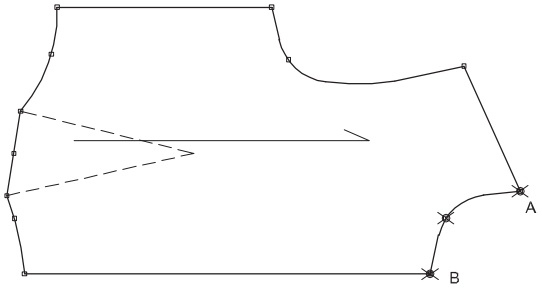
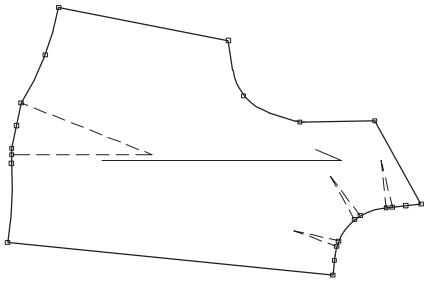


Fig 2



FDC22P0036

TASK 3: **Close a dart**

1 Open the bodice block front file.

2 Select the apex of the dart to close. (Fig 1)

3 Select Close Dart from the Darts menu. (Fig 2)

Note: The pattern will be adjusted as if the dart was physically closed.

4 Select the Undo tool or go to Open Dart Command to reopen the dart.

Fig 1

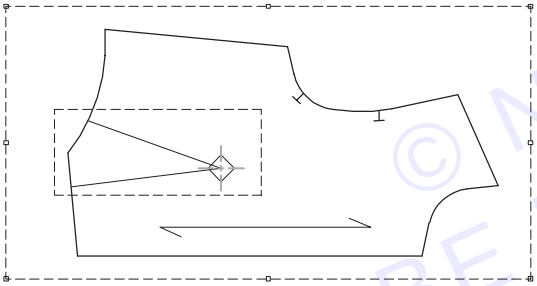
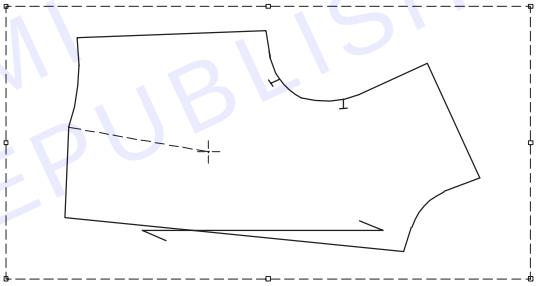


Fig 2



FDC22P0037

TASK 4: **Remove a dart**

1 Open the bodice block front pattern file and select the desired darts to be removed. (Fig 1)

2 Select Remove Dart from the Dart menu. (Fig 2)

Note: The darts will be deflated from the piece. No changes will be made on the contour.

Note: Get the work checked by your Instructor.

Fig 1

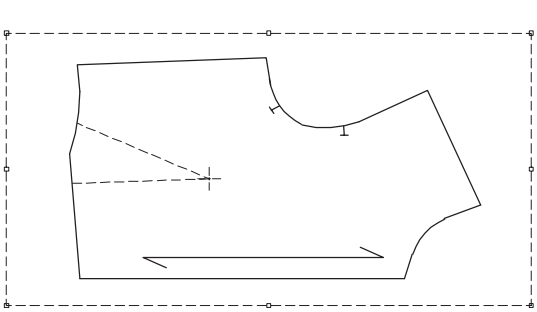
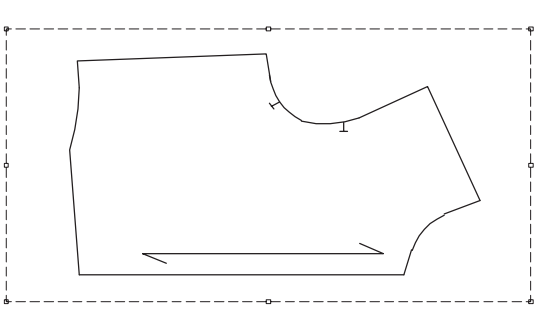


Fig 2



FDC22P0038

Edit Darts

Objectives : At the end of this exercise, you shall be able to:

- edit a dart
- copy & paste a dart.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

TASK 1: **Edit a Dart**

1 Open the bodice block front file and select the dart to be edited.

2 Choose Edit Dart from the Darts menu.

3 Fill necessary values like dark width and depth in the atributes box.

4 Click O.K.

— — — — —

TASK 2: **Copy & Paste a Dart**

1 Open a pattern file and Select the Dart to be copied.

2 Choose Copy dart from the Darts menu.

3 Open the layout where the object is going to be pasted.

4 Choose Paste Dart from the Dart menu and place it in the working area as required. Find the selected objects is placed into the file and displayed in the working area.

Note: Get the work checked by your Instructor

Manipulate Dart

Objectives : At the end of this exercise, you shall be able to:

- manipulate dart.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

TASK 1: **Manipulate Dart**

1 Open the Bodice Block Front file.

2 Click on its apex to select the dart. (Fig 1)

3 Select Rotate Dart to Point from the Dart menu. So that, the cursor becomes the dart tool and attach to the dart apex.

4 Drag the cursor (dart tool) to the new location along the perimeter of the pattern piece where the dart is to be moved. Click on the point.

5 Select a point on the piece to pivot around the dart apex.

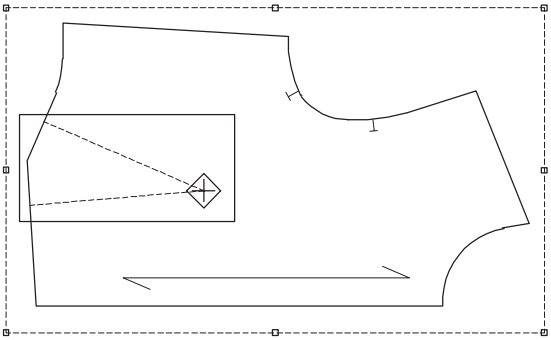
6 Pivot to the desired location and click the mouse.(Fig 2)

7 Note a Move Dart dialog box will appear listing the percentage and distance of the dart that has moved.

8 Click OK or enter in the desired percentage/ distance.(Fig 3)

Note: Get the work checked by your Instructor

Fig 1



FDC22P0039

Fig 2

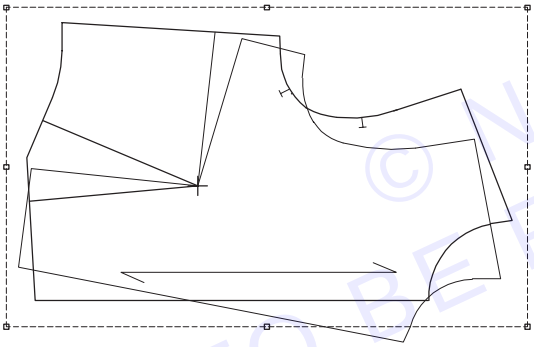
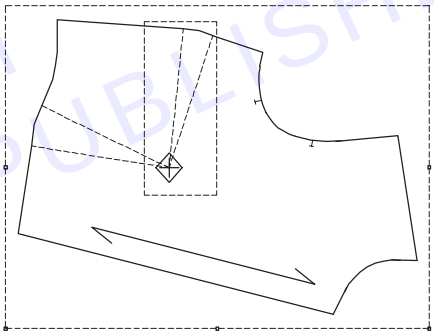


Fig 3



FDC22P0040

Create pattern for a Basic Straight Skirt

Objectives : At the end of this exercise, you shall be able to:

- create pattern for a basic straight skirt front
- create pattern for a basic straight skirt back
- create pattern for a skirt waist band**.**

Requirements

Tools/Instruments

- Computer with Pattern Making & Grading software, Design Book, Size Chart. - 1 No.

Procedure

TASK 1: **Create pattern for a Basic straight skirt front.**

1 Collect a Design of a Basic Straight Skirt from a design book. (Fig.1).

2 Collect the required measurements for a Basic Straight Skirt from the size chart.

Skirt length =61 Cms.

Hip =96 Cms. + 4 Cms. for Ease

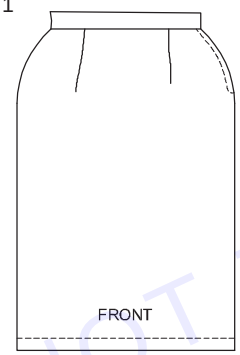
Waist =70 Cms. + 4 Cms. for Ease

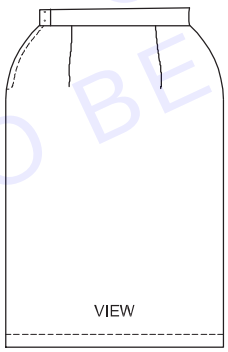
Waist to hip =20 Cms.

3 Double click the icon PATTERN CAD on the desk top OR

Choose all programs > CAD > from the start menu. (Fig.2)

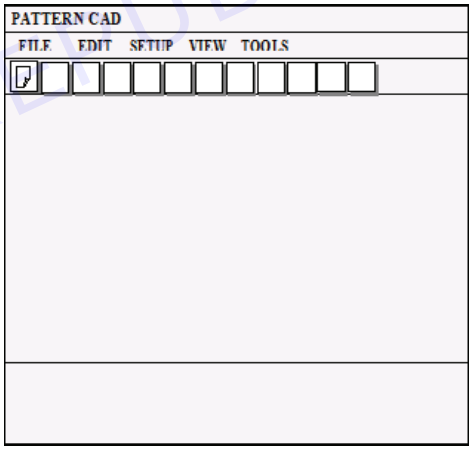
Fig 1





BASIC STRAIGHT SKIRT

Fig 2



FDC22P0041

4 Select options in the menu bar. Select “Cms.” as unit.

5 Go to File and click new.

6 Give the name of the pattern.

7 Create a Rectangle of 57 cms,. length (for skirt length minus 4 cms. of Waist Band width) and 25 Cms. (1/4 Hip + 1 Cm. for ease) width.

8 Name the corner points of the rectangle from 1 to 4 as shown in the figure 3.

9 Select point tools and mark the points 5 & 6 as follows.

1-5 = 21 Cms (one fourth of waist plus 1 cm for ease + 2.5 Cms. for dart).

1-6 = 20 Cms (Waist to hip measurement).

10 Pick the selection tool and click the point 3 and press del button. (Fig 4).

Fig 3

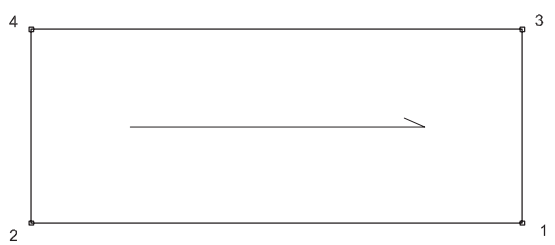
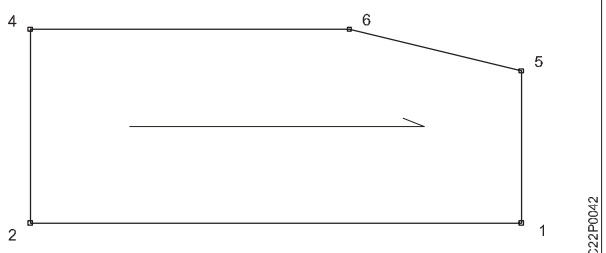


Fig 4



FDC22P0042

11 Use move point tool and move the point 5 straight to- wards the top side with a distance of 1 Cm. for waist curve.

12 Create Curve points 7 & 8 in the mid level of 5-6 and 5 Cms. from point 5 respectively. (Fig 5)

13 Move the points 7 & 8 with the help of move point tool and make smooth side and waist curves. (Fig 6)

Fig 5

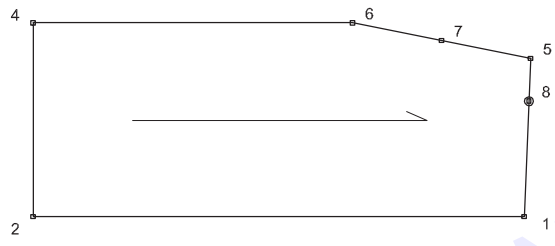
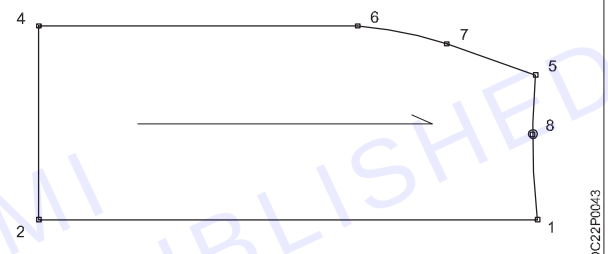


Fig 6



FDC22P0043

14 Create point 9 for dart placement on the waistline at 12 5 Cms. from point 1 (two-thirds of the front waist).

15 Create points 10 & 11 both sides of the point 9 at the distance of 1.25 Cms. for dart legs. (Fig 7).

16 Select dart tool. Pick first point 10 and second point. Enter the dart length as 8 Cms. in the dialog box. (Fig.8)

17 Select Text Tool and Type the name and other pattern particulars. (Fig.9).

18 Add seam and hem allowance. (S.S.No.1).

19 Open the pattern in the fold line. (S.S.No.2).

20 Save the file in the proper folder.

Fig 7

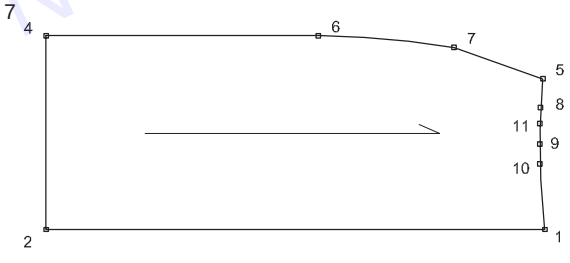
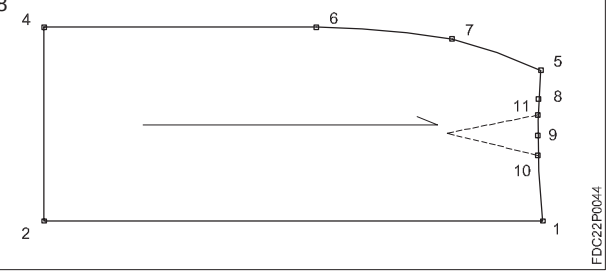
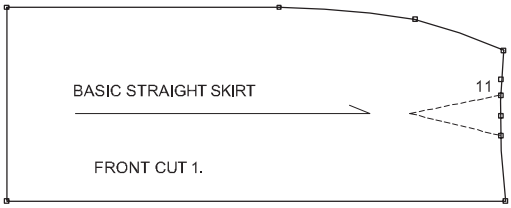


Fig 8



FDC22P0044

Fig 9



TASK 2 : **Create pattern for a Basic straight skirt Back.**

1 Repeat the same process as explained in Task 1.

2 Do the following Changes.

- 1-5 = 23 Cms., (one fourth of waist plus 1 cm for ease + 4.5 Cms. for dart).
- 9 = mid level of 1-5.
- 9-10 & 9 - 11 = 2.25 Cms. (For 4.5 Cms. dart).
- Dart Length = 14 Cms.

3 Open the Front Skirt Pattern.

4 Select the measure tool in the tool bar.

5 Click the start point 6 and click the end point 5.

6 Note the measurement of the curve 6 - 5 in the dialog box.

7 Check the same for the back pattern.

8 Adjust the curve 6 -5 in the back pattern by moving point 7 with the help of move point tool.(Fig 1)

9 Check the curve 6 -5 has the equal measure as in the Front Pattern.

10 Select the text tool and type the pattern particulars. (Fig 2)

11 Add seam and hem allowance. (S.S.No.1).

12 Open the pattern in the fold line (S.S.No.2).

13 Save the file in the proper folder.

Fig 1

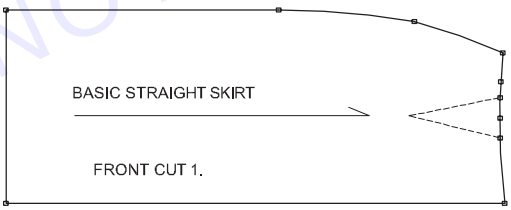
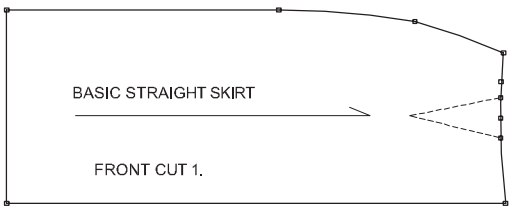


Fig 2



TASK 3: **Create pattern for a Skirt Waist Band**

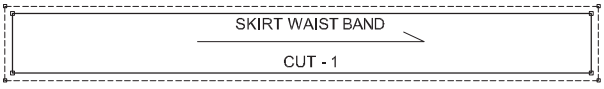
1 Create a Rectangle of 79 cms,. length (waist measurement + 4 Cms. for ease + 5 Cms. for Waist band over lap) and 8 Cms. (Double of Waist band width (4 Cms.)) width.

2 Select the text tool and type the pattern particulars.

3 Add seam allowance all sides 1 cm each. (Fig 3).

4 Save the file in the proper folder.

Fig 3



Note: Get the work checked by your Instructor.

Skill sequence

Add Seam Allowance to the pattern

Objectives : At the end of this exercise, you shall be able to:

- add seam allowance to the pattern.

Add Seam Allowance to the pattern

1 Open a straight skirt front pattern. (Fig.1).

2 Select the seam tool.

3 Select first seam point 2 by holding the mouse down.

4 Drag cursor end of the seam in the Clockwise direction and click the end seam point 4.

5 Assign the exact seam (2.5 Cms. as hem allowance) in the dialog box.

6 Click O.K.

7 Select the second seam point 4 by holding the mouse down.

8 Drag cursor end of the seam in the clockwise direction and click the end seam point 5.

9 Enter the seam value. (1.5 Cms.). 10 Click O.K.

11 Repeat the same process for 5 to 1 waistline and give seam allowance as 1 Cm. (Fig.2)

12 Use the “Switch to seam” tool and find that the seam lines are coming inside the pattern. (Fig.3)

Note 1: As the line 1-2 is the Center Front Line and Fold line, There is no necessary to give seam allowance.

2: With the help of delete seam or unseam tool, we can delete all the seams. Remove seam is used to change one particular seam.

Fig 1

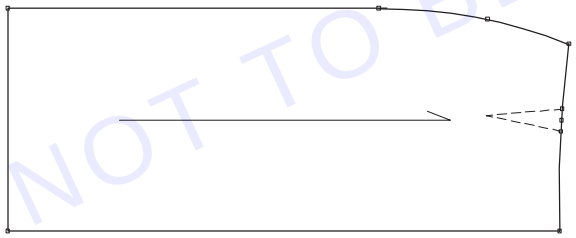


Fig 2

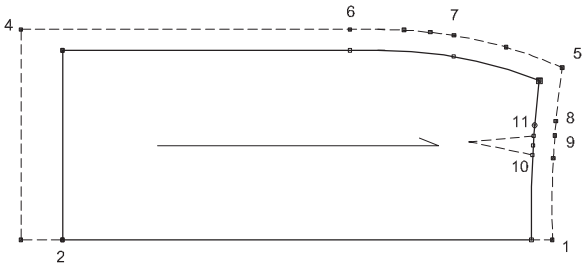
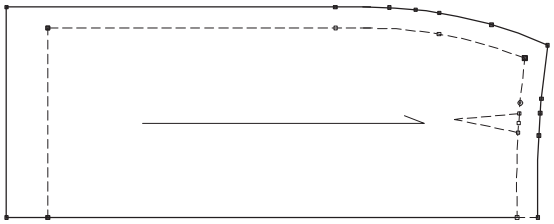


Fig 3



FDC22P0047

Open the pattern in the fold line

Objectives : At the end of this exercise, you shall be able to:

- open the pattern in the fold line

1 Open a straight front pattern. (Fig.1).

2 Select point 1 (top of the fold line) with selection tool by holding the mouse down.

3 Drag cursor end of the fold line in the Clockwise direction and release the mouse button at the end point 2.

4 Click mirror tool to find that the pattern has been opened in the fold line. (Fig.2)

Fig 1

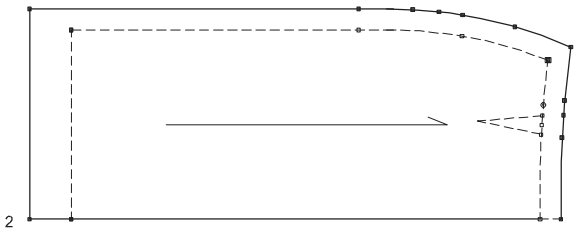
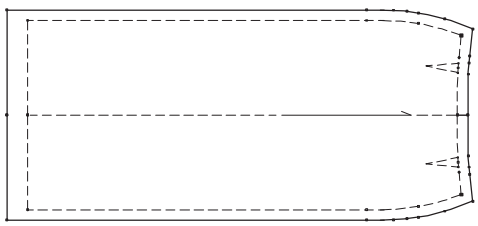


Fig 2



Practice Pleat Tools

Objectives : At the end of this exercise, you shall be able to:

- create a box pleat
- create a knife pleat
- create multi pleats
- remove a pleat

Requirements

Tools/Instruments

- Computer with Pattern Making & Grading software. - 1 No.

Procedure

TASK 1: **Create a Box Pleat**

1 Open a Basic Straight Skirt Front pattern file.

2 Remove the dart and seam allowances. (Fig 1)

3 Select pleat start point.

4 Select pleat end point (Fig 2)

Fig 1

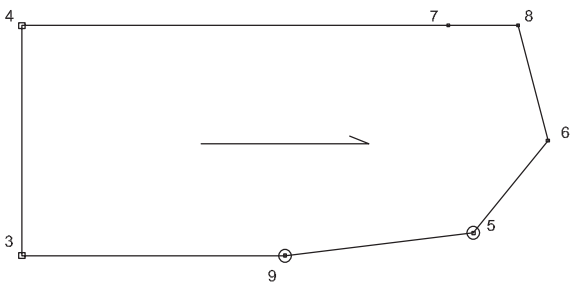
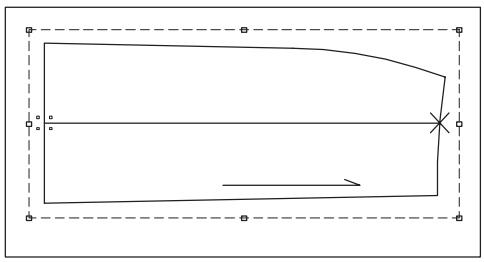


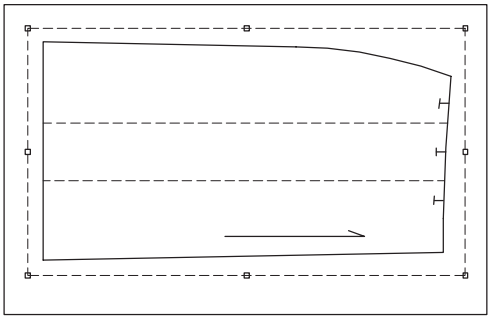
Fig 2



5 Select Box Pleat in the Pleat attribute box and Fill the details like Depth of pleat = 3 Cms. and No. of pleat = 1.

6 Click O.K. (Fig 3)

Fig 3



TASK 2: **Create a Knife Pleat**

1 Open a Basic Straight Skirt Front pattern file.

2 Remove the dart and seam allowances. (Fig 1)

3 Select Knife Pleat in the Pleat Attribute box.Select start and end point

4 Specify the details like Depth of First and Second Pleat (3 and 2 Cms), No. of pleats = 3, Distance First pleat = 1.5 Cms., Second pleat = 2 Cms.(Fig 2)

5 Click O.K. (Fig 3)

Fig 1

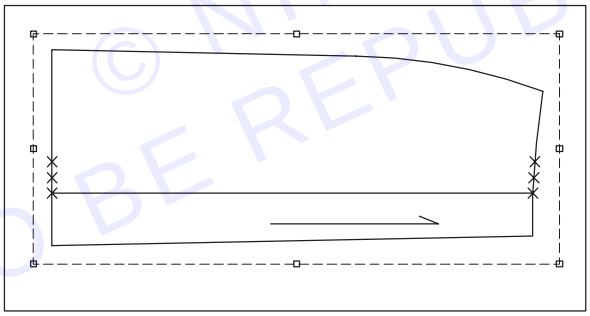


Fig 2

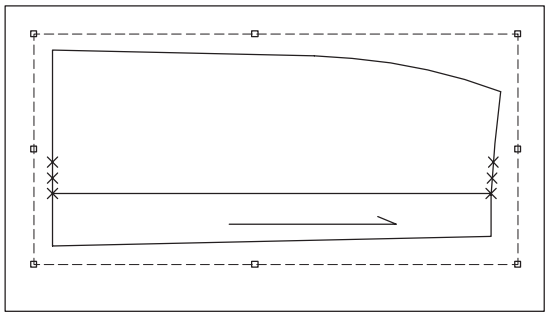
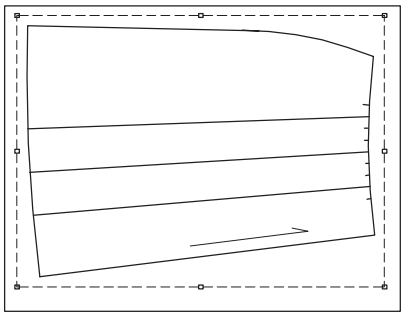


Fig 3



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TASK 3: **Create Multi Pleats**

1 Open a Basic Straight Skirt Front pattern file.

2 Remove the dart and seam allowances.

3 Select the First and Last points of Multi Pleat.

4 Go to Pleats Menu and select Create Multi Pleat option.

5 Enter Number of Pleats.

6 Check the Set on First Point and Set on Last Point checkboxes as required, otherwise the first and last points will be skipped.

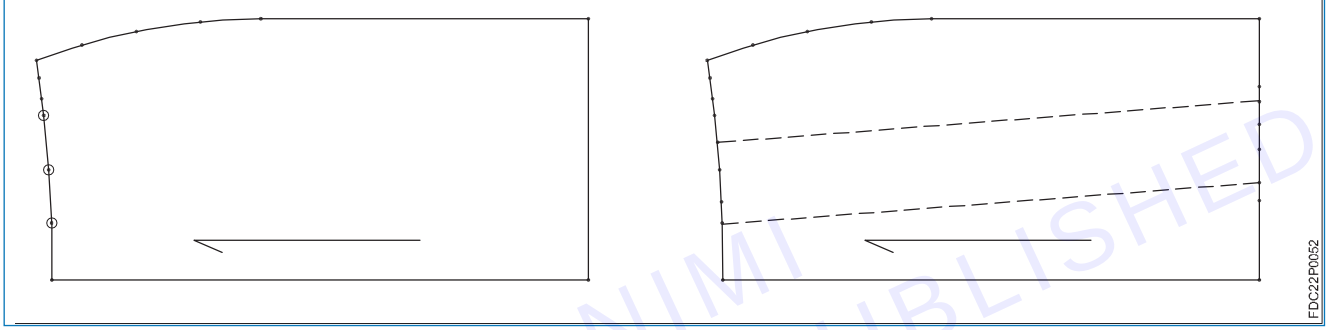
7 Set the First and Last point Angles.

8 Select the type of the pleat (Box or Knife)

9 Check CCW Folded in order to change the pleat direction.

10 Check the Variable Pleat in order to define different depth on two different sides of pleat. (Fig 1)

Fig 1



Note: The Pleat angles will be divided equally: for instance if you got 4 points and the first angle is 30 degrees and the last angle is 45 degrees then the second angle will be 35 degrees, and the third one will be 40 degrees.

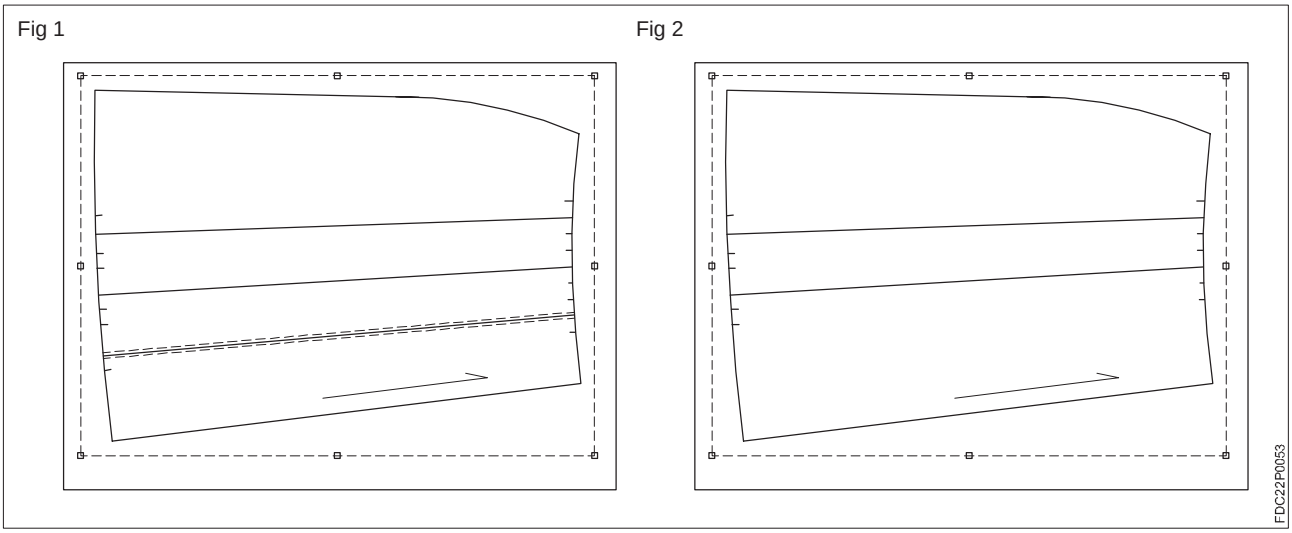
TASK 4: **Remove a Pleat**

1 Open a Skirt pattern with pleats.

2 Click and drag to select the points that include the Pleat Line(s) to be removed. (Fig 1)

3 Choose Remove Pleat Lines from the Pleat Menu. All Pleat Lines between the selected points will be removed. (Fig 2)

Fig 1 Fig 2



Note: All Pleat Lines between the two selected points will be removed. To remove just one of the Pleat Lines, select the first point, then press and hold the Shift key while selecting the second point. Only those two points will be grouped, and only that Pleat Line will be removed

Note: Get the work checked by your Instructor.

Practice Fullness Tools

Objectives : At the end of this exercise, you shall be able to:

- add Fullness in a pattern
- close Fullness in a pattern.

Requirements

Tools/Instruments

- Computer with Pattern Making & Grading software - 1 No.

Procedure

TASK 1: **Add Fullness in a pattern**

1 Open a Basic Straight Skirt Front pattern file.

2 Remove the dart and seam allowances.

3 Select add fullness tool. (Fig.1)

4 Select the opening pivot point.

5 Select the fullness end point. (Fig.2)

6 Specify the values in the box. Enter the value for width for parallel shirt = 10 and others = 0.(Fig 3)

7 Click O.K.

Fig 1

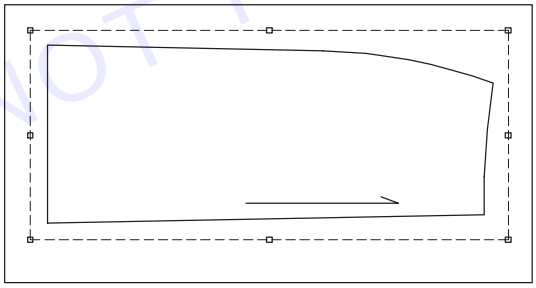


Fig 2

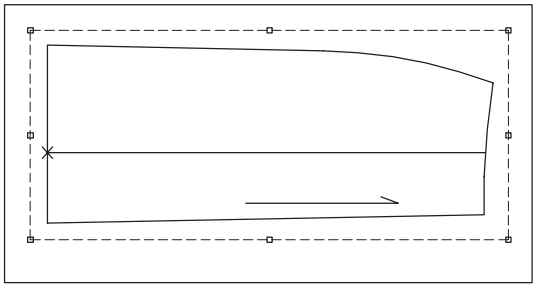
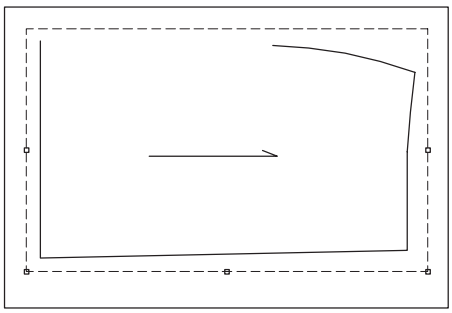


Fig 3



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TASK 2: **Close Fullness in a pattern**

1 Open a pattern with fullness.

2 Select the fullness points.

3 Hold the shift key while selecting the points.

4 Hold the Control key and push the Delete key to remove the fullness.

Note: You can also use the Undo command to bring the fullness back.

Note: Get the work checked by your Instructor.

Create pattern for a 'T' Shirt using Spec. Sheet

Objectives : At the end of this exercise, you shall be able to:

- create pattern for a 'T' shirt front
- create pattern for a 'T' shirt back
- create pattern for a 'T' shirt sleeve.

Requirements

Tools/Instruments

- Computer with Pattern Making & Grading software & Spec. sheet of a 'T' Shirt. - 1 No.

Procedure

TASK 1: **Create pattern for a 'T' Shirt Front**

1 Read completely all the details of the Specification sheet of a 'T' Shirt. (Fig.1).

2 Select a size for making patterns. (Size 'M').

3 Open the software.

4 Select options in the menu bar. Select "Cms." as unit.

5 Go to File and click new.

6 Give the name of the pattern as 'T' Shirt Front.

7 Create a Rectangle of 57.5 cms. length (for Total length from HSP) and 21.5 Cms. width. (Half of ½ chest width).

8 Name the corner points of the rectangle from 1 to 4.

9 Select point tool and mark the points 5 & 9 as follows. (Fig.2).

1-5 = 18.5 Cms. (Half of Shoulder). 1-6 = 8.5 Cms (Half of neck width). 1-7 = 7 Cms. (Front neck drop).

1-8 = 1.5 Cms. (Back neck drop).

2-9 = 24 Cms. (½ Armhole straight + 4 Cms. for Shoulder Drop).

10 Pick the selection tool, click the point 1 and press del button. Delete point 2 also. (Fig.3).

11 Use move point tool and move the point 5 straight towards the bottom side with a distance of 4 Cms. for shoulder drop. (Fig.4).

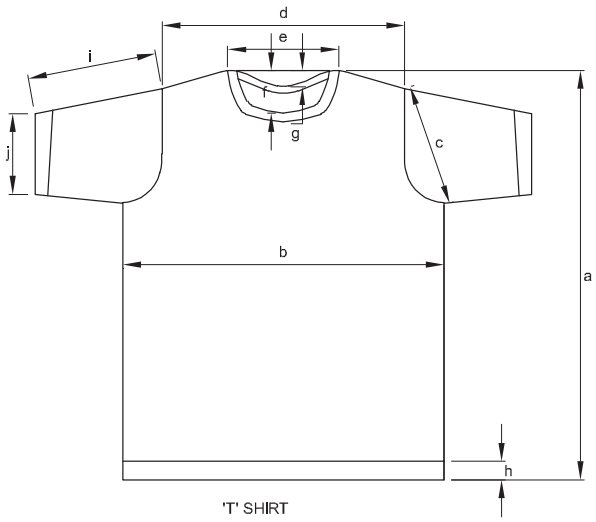
12 Go to menu and copy the pattern.

13 Paste the pattern near by the front pattern and give name as 'T' Shirt back.

14 Click the Front pattern with the help of selection tool

15 Delete the point 8.

Fig 1



'T' SHIRT

MEASUREMENT CHART (IN CMS.)

SI.NO	NOTATION	MEASUREMENT	S	M	L	XL
1	1	LENGTH FROM HSP	55.5	57.5	59.5	61.5
2	2	HALF CHEST	41	43	45	47
3	3	HALF ARMHOLE STRAIGHT	19	20	21	49
4	4	SHOULDER	35	37	39	55.5
5	5	NECK WIDTH	16	17	18	19
6	6	FRONT NECK DROP	6.5	7	7.5	8
7	7	BACK NECK DROP	1.5	1.5	1.5	1.5
8	8	BOTTOM HEM	4	4	4	4
9	9	SLEEVE LENGHT	20	21	22	23
10	10	HALF SLEEVE OPEN	13	14	55.5	55.5

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Fig 2

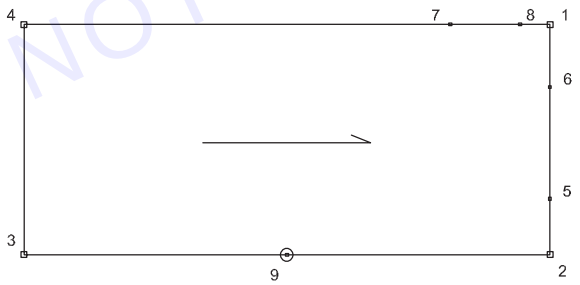

Fig 3

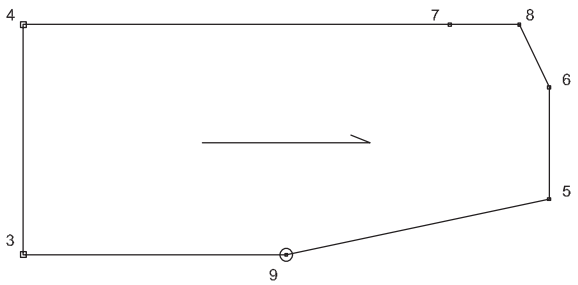

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Fig 4

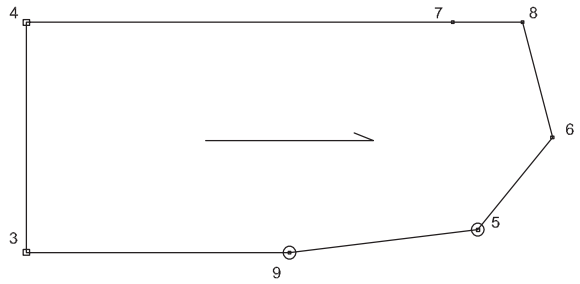
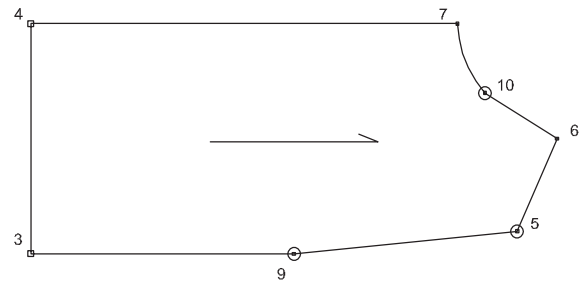


Fig 5



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16 Create Curve points 10 in the mid level of 6-7. Move the points 10 with the help of move point tool and make smooth front neck curve. (Fig.5)

17 Go to menu and select view and click Rulers.

18 Pick the selection tool and click on the horizontal ruler and drag the mouse down wards without releasing the mouse button for getting guide line.

19 Align the guide line 'X' on the point 5.

20 Get another guide line 'Y' which in vertical direction and align it at point 9.

21 Mark the curve point 11 with a distance of 2 cms. from point 9 on the line 9-5.

22 Shape the Front armhole with the help of move point tool.

23 Shape the curve inside the guide line X with the curve depth of 2 cms. inside. (Fig 6)

24 Select the guide lines X and Y with help of the selection tool and press del.

25 Select Text Tool and Type the name and other pattern particulars. (Fig 7).

Fig 6

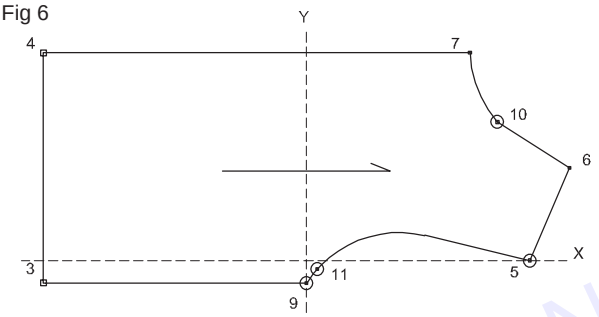
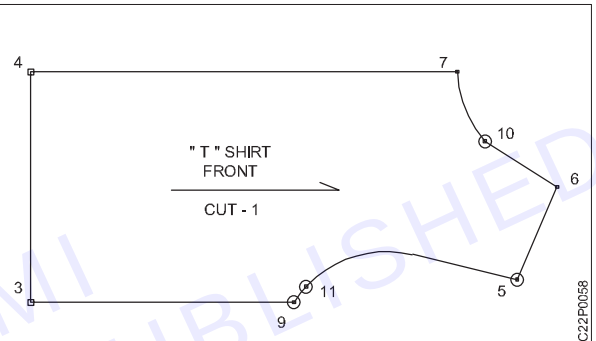


Fig 7

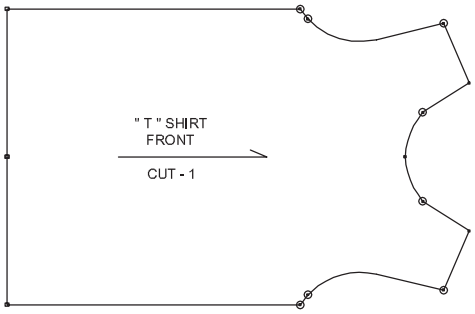


26 Add seam allowance 1 cm each at the neck curve and shoulder. Add 1.5 Cms. as seam allowance at the arm- hole and side seam for overlock and 4cms. at the bot- tom as hem allowance. (Ref. S.S.No.1 of Ex.No.1.15).

27 Open the pattern in the fold line. (Ref. S.S.No.2 of Ex.No.1.15). (Fig 8).

28 Save the file in the proper folder.

Fig 8



TASK 2: **Create pattern for a 'T' Shirt Back**

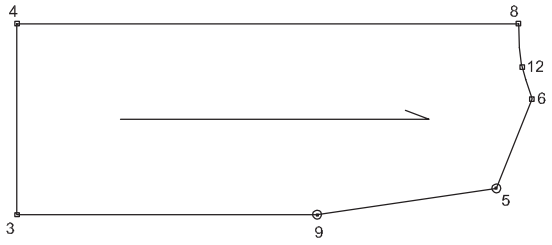
1 Open the saved 'T' Shirt back pattern in Task 1.

2 Delete the point 7.

3 Create Curve points 12 in the mid level of 6-8 and Move the points 12 with the help of move point tool and make smooth back neck curve. (Fig 1).

4 Go to menu and select view and click Rulers.

Fig 1



5 Pick the selection tool and click on the horizontal ruler and drag the mouse down wards without releasing the mouse button for getting guide line.

6 Align the guide line 'X' on the point 5.

7 Get another guide line 'Y' which in vertical direction and align it at point 9.

8 Mark the curve point 13 with a distance of 2 cms. from point 9 on the line 9-5.

9 Shape the Back armhole with the help of move point tool.

10 Shape the curve on the guide line X from the middle of the armhole up to the shoulder. (Fig 2)

11 Select the guide lines X and Y with help of the selection tool and press del.

12 Select Text Tool and Type the name and other pattern particulars. (Fig 3).

Fig 2

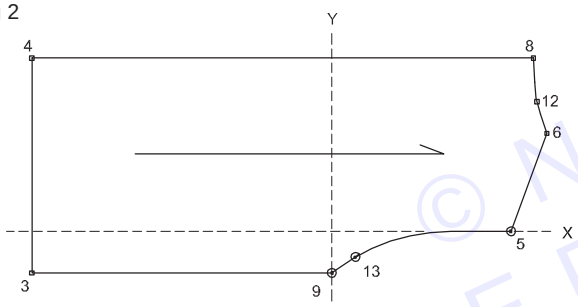
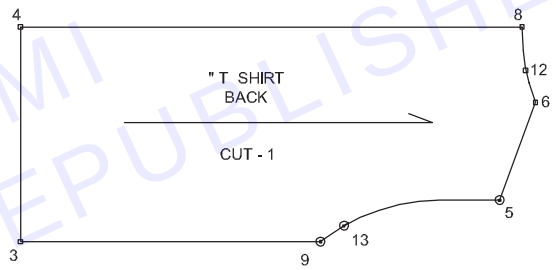


Fig 3

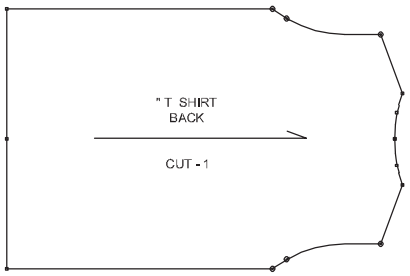


13 Add seam allowance 1 cm each at the neck curve and shoulder. Add 1.5 Cms. as seam allowance at the arm- hole and side seam for overlock and 4cms. at the bot- tom as hem allowance.

14 Open the pattern in the fold line

15 Save the file in the proper folder. (Fig 4).

Fig 4

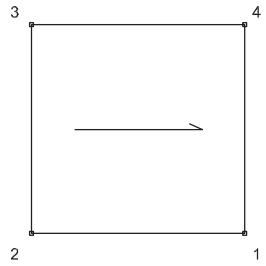


TASK 3: **Create pattern for a 'T' Shirt Sleeve.**

1 Create a Rectangle of 21 cms,. length (Sleeve length) and 20 Cms. width (Armhole length).

2 Mark points 1,2,3 & 4. (Fig 1).

Fig 1



3 Mark point 5 from point 1 with the distance of 4 cms (Crown height).

4 Mark point 6 from point 3 with the distance of 14 Cms. (Half of Sleeve opening).

5 Delete points 1 & 2. (Fig 2).

6 Mark curve point 7 at the mid level of 4-5. (Fig 3)

Fig 2

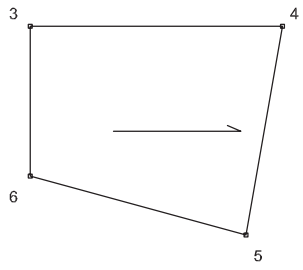
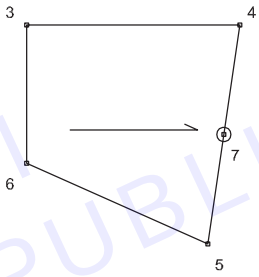


Fig 3



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7 Move curve point 7 and make 4-5 as smooth curve.

8 Also mark curve point 8 near point 5 at the distance of 3 cms. (Fig 4).

9 Move point 8 and make a smooth curve. (Fig 5).

Fig 4

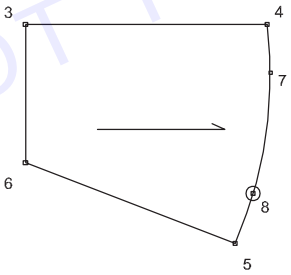
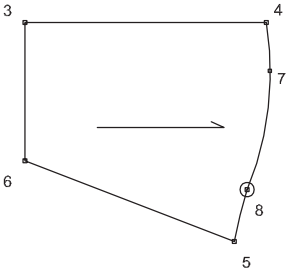


Fig 5



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10 Open the pattern in the fold line. (Fig 6).

11 Select the cut tool and select the line 3-4 (Fig 7).

12 Select the selection tool. Click the top part of the sleeve and drag. (Fig 8).

13 Identify the bottom portion as Back part of the sleeve and top portion will be Front.

14 Select the top portion of the sleeve.

15 Move the point 8 and modify the front armhole curve. (Fig 9).

16 Select "Join the pieces tools".

17 Select the point 4 at the bottom portion and also click the point 4 of the top portion to join.(Fig 10).

18 Pick the "Trace tool" and select all the lines of the top and bottom portion of the sleeve.

19 Pick the selection tool and click on the sleeve part and drag. (Fig 11).

Fig 6

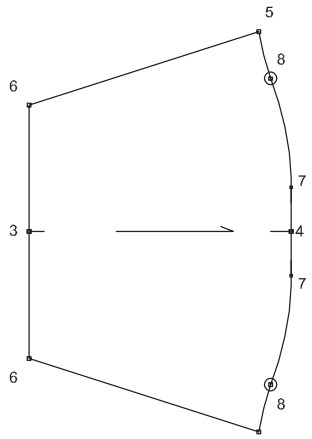

Fig 7

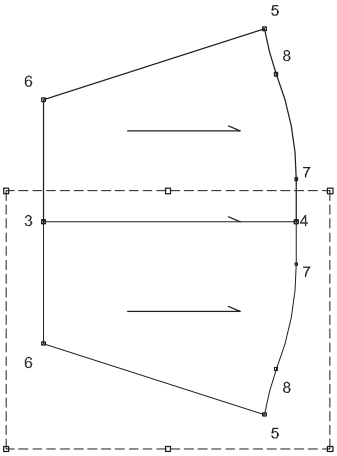

Fig 8

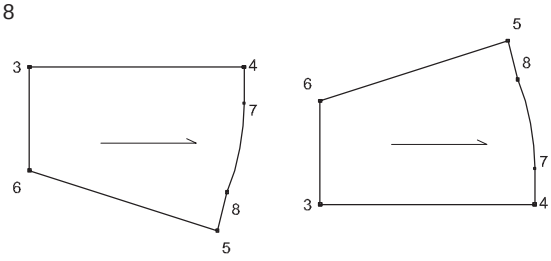

Fig 9

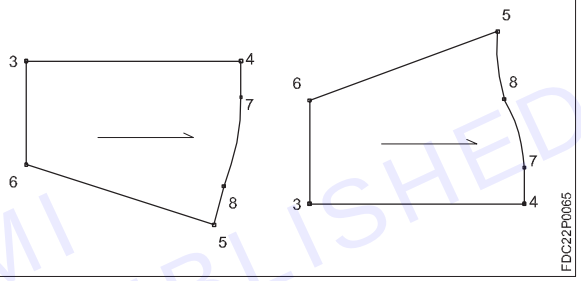

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Fig 10

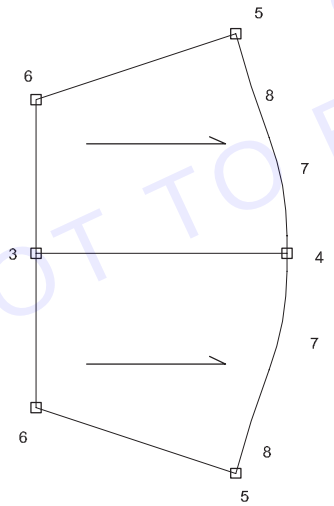
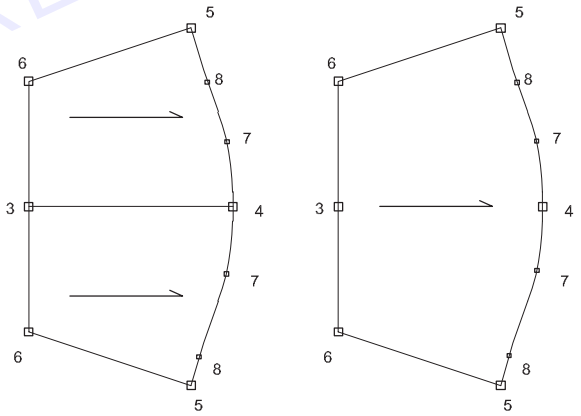


Fig 11



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20 Delete the point 3.

21 Open the 'T' Shirt Front and Back pattern.

22 Select the measuring tool and measure the armhole part of the Front and Back pattern.

23 Select the sleeve pattern and pick the move point tool.

24 Use the armhole curve points for adjusting according to the required front and hack armhole measurements (Fig 12)

25 Select the text tool and type the pattern particulars.(Fig 13).

26 Add seam allowance 1.5 Cms. at the armhole and side seam for over lock and 4cms. at the bottom as hem allowance.

27 Save the file in the proper folder.

Note: Get the work checked by your Instructor.

Fig 12

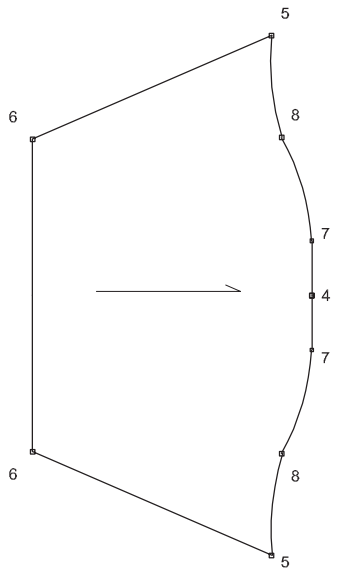
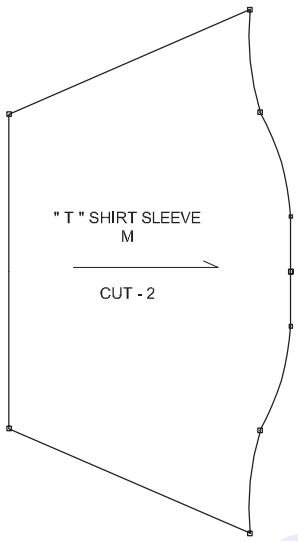


Fig 13



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Grade a Pattern

Objectives : At the end of this exercise, you shall be able to:

- create a pocket pattern
- grade the pocket pattern.

Requirements

Tools/Instruments

- Computer with Pattern Making & Grading software - 1 No.

Procedure

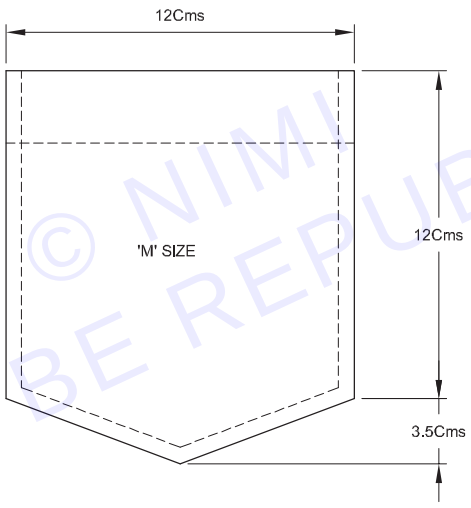
TASK 1: **Create pattern for a Pocket**

1 Collect the required measurements and design of a Pointed Patch pocket for at least 4 no. of sizes. (Fig.1).

2 Select the measurements for 'M' size.

3 Open the software and create a rectangle of 21 Cms. length (Pocket length + pocket hem + 2 Cms. for top and bottom seam allowance) and height of 14 Cms. (Pocket width + 2 cms. for two seams).

Fig 1



Sl.No.	Name of the measurement (in Cms.)	Size 'S'	Size 'M'	Size 'L'	Size 'XL'
1	Pocket Length	14.5	15.5	16.5	17.5
2	Pocket Width	11	12	13	14
3	Pocket Hem	3.5	3.5	3.5	3.5

4 Number the pattern points as 1,2,3 & 4. (Fig.2).

5 Mark points 6 & 7 with a distance of 3.5 Cms. from the points 3 & 2. Mark point 5 at the mid-level of 2-3. (Fig.3).

6 Delete the points 2 & 3. (Fig.4).

7 Select the text tool and type the required pattern particulars. (Fig.5).

8 Save the file in the proper folder.

Fig 2

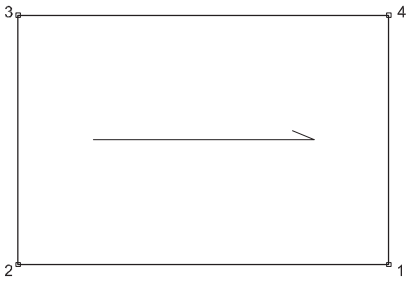
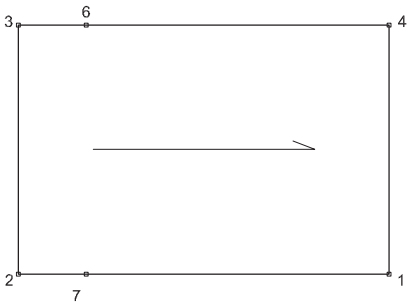


Fig 3



FDC22P0075

Fig 4

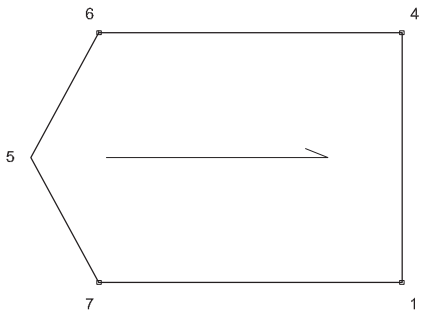
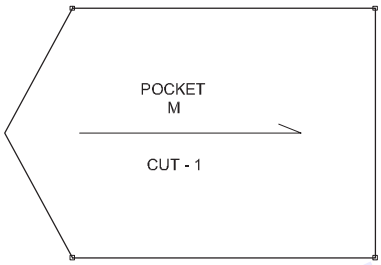


Fig 5



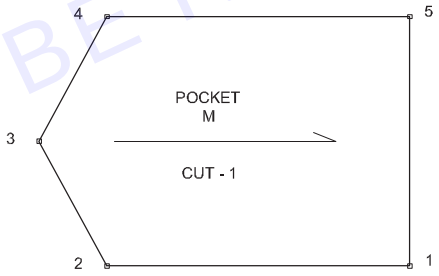
FDC22P0076

TASK 2: **Grade the pocket pattern.**

1 Open the required pocket pattern.

2 Number the pattern corners as 1,2,3,4 & 5. (Fig 1).

Fig 1



3 Click point 1 by selection tool.

4 Goto “Edit” menu and select “Point Attributes”.

5 Select grading point to convert the normal point into grading point.

6 Repeat the above process for other points also.

7 Goto “Grading” menu.

8 Select ‘sizes”.

9 Click “insert” in the box.

10 Insert the sizes ‘L’ and ‘XL’. 11 Click “append” in the box.

12 Type the size ‘S”.

13 Click the colour box and select suitable colour for each size.

14 Click the close button.

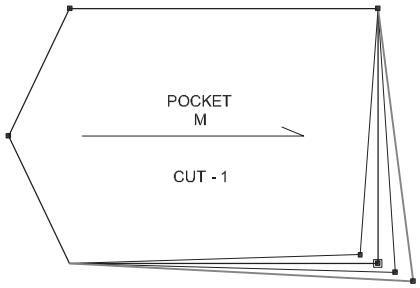
15 Goto “View” menu. Select “Grading”. Select “Grading Table”.

16 Calculate the grading increments for each point and prepare the grading increment table. (Skill Sequence No 1).

17 Click the point 1 with the help of the selection tool.

18 Give the grading increments for all the sizes, Observe the point 1 has been graded for the all the sizes.(Fig 2)

Fig 2



19 Apply the grading increments for the point 2. (Fig 3).

20 Apply the grading increments for the point 4. (Fig 4). (There is no grading increments for point 3).

Fig 3

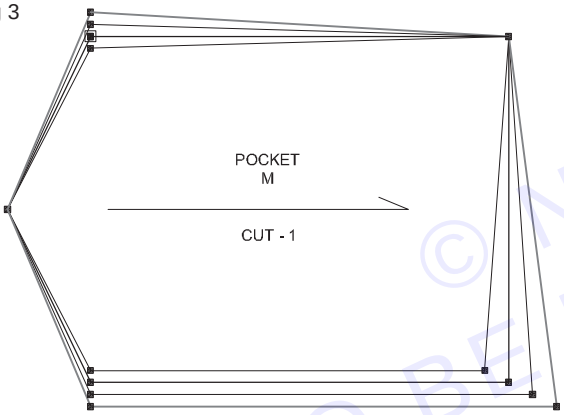
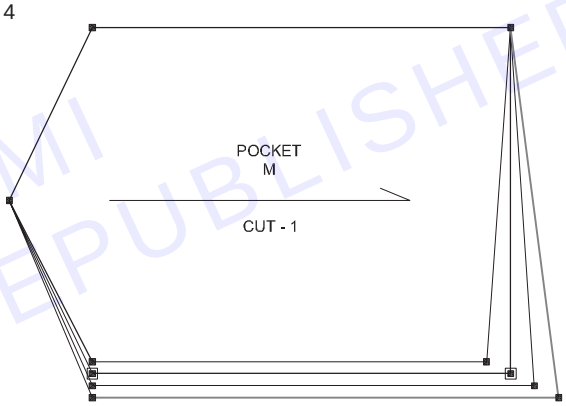


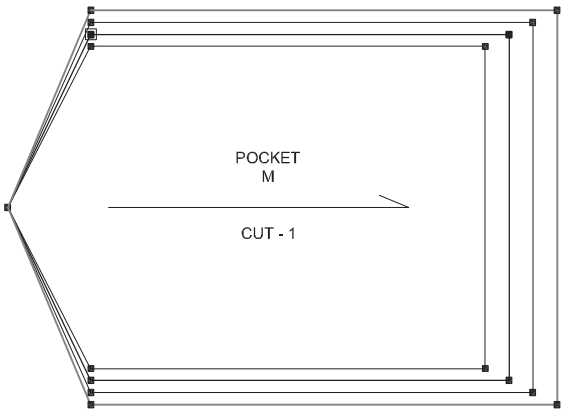
Fig 4



21 Apply the grading increments for the point 4. (Fig 5).

22 Save the file in the proper folder. (Fig 5).

Fig 5



Note: Get the work checked by your Instructor.

Skill Sequence

Calculate Grading Increments

Objectives : At the end of this exercise, you shall be able to:

- calculate grading increments and prepare the grading increment table.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

1 Open the required pocket pattern. Note the measurements. (Fig 1).

2 Verify the grading axes (Fig 2).

Fig 1

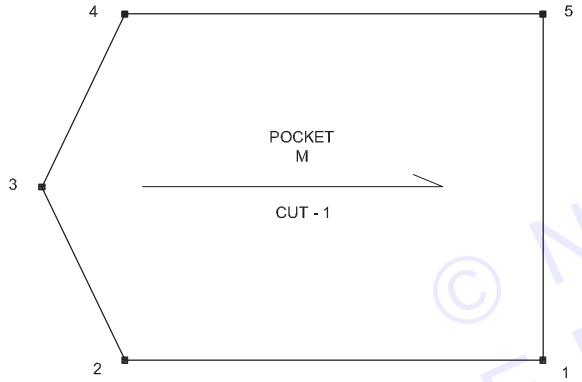
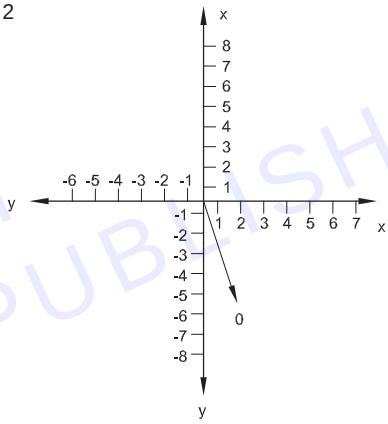


Fig 2



3 Prepare a Grading increment table for all the required sizes.(Fig.3).

Sizes	M to S		M to L		L to XL	
Point	X	Y	X	Y	X	Y
1						
2						
3						
4						
5						

4 Calculate Grading increments for point 1.

Grading Increment for Point 1.

From size M to L in -Y direction : Half Pocket width for 'L' minus half pocket width for 'M')
= 6.5 Cms. minus 6 Cms.
= 0.5 Cms.
For -Y direction = -0.5 Cms.

From size M to L in + X direction : (Pocket Length for 'L' minus Pocket Length for 'M")
= 16.5 Cms. minus 15.5 Cms.
= 1 Cm.
For +X direction = +1 Cm.

From size L to XL in -Y direction : (Half Pocket width for 'XL' minus half pocket width for 'L')
= 7 Cms. minus 6.5 Cms.
= 0.5 Cms.
For -Y direction = -0.5 Cms.

From size L to XL in + X direction : (Pocket Length for 'L' minus Pocket Length for 'M")
= 17.5 Cms. minus 16.5 Cms.
= 1 Cm.
For +X direction = +1 Cm.

From size M to S in +Y direction : (Half Pocket width for 'M' minus half pocket width for 'S')
= 6 Cms. minus 5.5 Cms.
= 0.5 Cms.
For -Y direction = 0.5 Cms.

From size M to L in - X direction : (Pocket Length for 'M' minus Pocket Length for 'S")
= 15.5 Cms. minus 14.5 Cms.
= 1 Cm.
For +X direction = -1 Cm.

5 Fill the respective X and Y increment values for point 1 of all sizes in the grading increment table.

6 Calculate the grading increments for other points as like the point 1.

7 Fill all the grading increment values for all the grading points of all the required sizes.

8 Complete the grading table.

Note: Get the work checked by your Instructor.

Sizes	M to S		M to L		L to XL	
Point	X	Y	X	Y	X	Y
1	-1	+0.5	+1	-0.5	+1	-0.5
2	0	+0.5	0	-0.5	0	-0.5
3	0	0	0	0	0	0
4	0	-0.5	0	0.5	0	0.5
5	-1	-0.5	1	0.5	1	0.5

Stack Graded Patterns

Objectives : At the end of this exercise, you shall be able to:

- stack point of graded patterns
- stack along line of graded patterns.

Requirements

Tools/Instruments

- Computer with Software for Pattern Making & Grading - 1 No.

Procedure

TASK 1: **Stack point of graded patterns.**

1 Open the graded pocket pattern file. (Fig.1).

2 Select the point '1' on which to stack the nest.

3 Go to Grading menu and Select Stack.

4 Choose stack point.

5 Select both Along 'X' Axis and Along 'Y' Axis in the stack point dialog box.

6 Click O.K. (Fig 2).

Fig 1

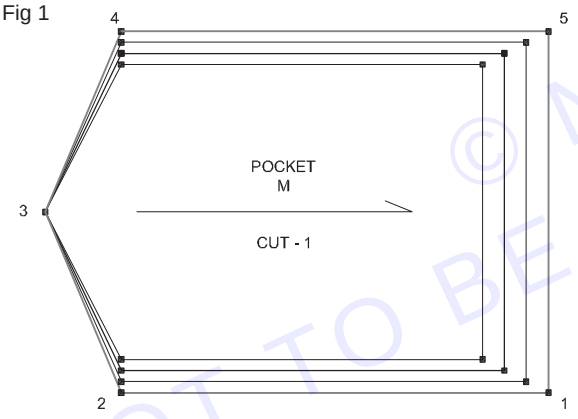
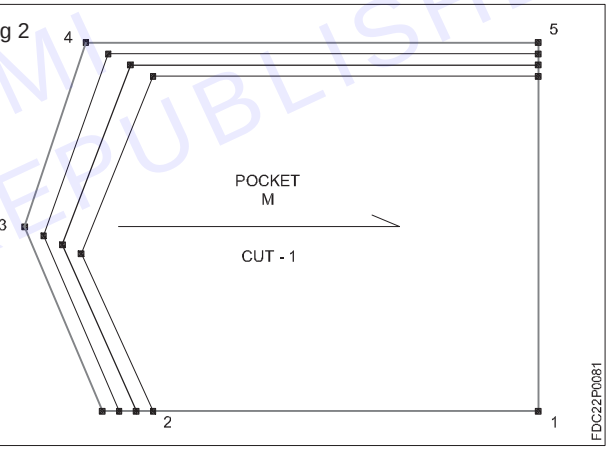


Fig 2



Note: To return to the initial position, determine a point at which all of the grading points are positioned in the same location prior to using the Stack command. Re-stack the nest at this predetermined point to return to the initial position. If no common point is available, simply add a button mark (without grading) to the piece and use that point as the initial point. The extra button mark may be deleted later.

TASK 2: **Stack along line of graded patterns.**

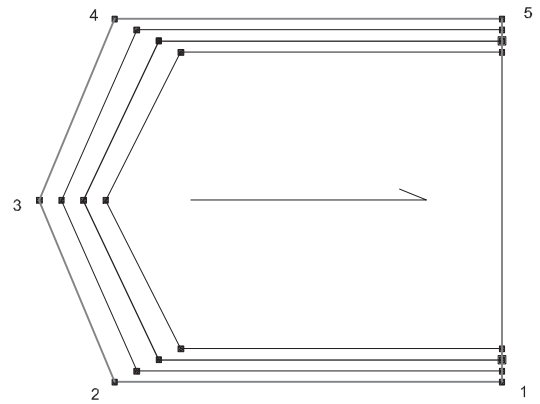
1 Open the graded pocket pattern file.

2 Select the line 1-2 which will be nest line that all the sizes will be stack to.

3 Click Grading menu -> Stack, choose Stack along line, the grading will be stack along the line (Fig.1).

Note: Get the work checked by your Instructor.

Fig 1



Copy and Paste Grading

Objectives : At the end of this exercise, you shall be able to:

- copy & paste grading
- paste 'X' grading
- paste 'Y' grading
- paste around grading.

Requirements

Tools/Instruments

- Computer with Software for Pattern Making & Grading - 1 No.

Procedure

TASK 1: **Copy & Paste grading.**

1 Open the graded pocket pattern file. (Fig 1).

2 Select point 1.

3 Go to Grading menu and select "Copy Grading".

4 Select point 2.

5 Go to Grading menu and select "Paste Grading" and choose "Paste Grading". (Fig 2).

Fig 1

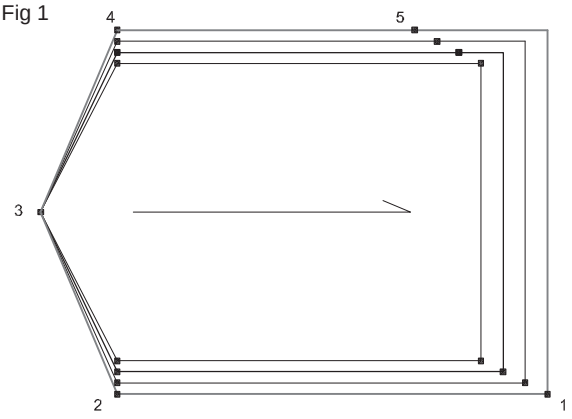
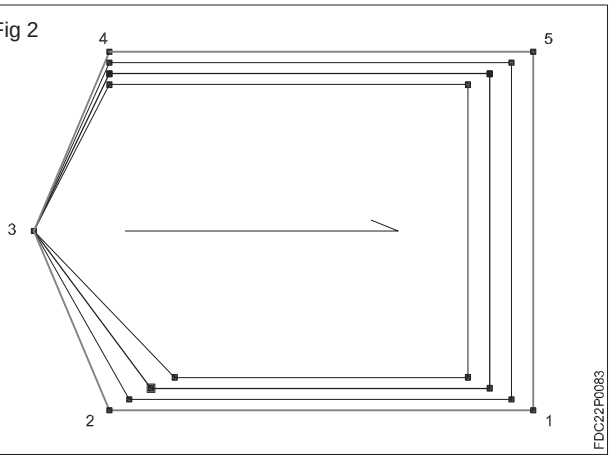


Fig 2



TASK 2: **Paste 'X' grading.**

1 Open the graded pocket pattern file.

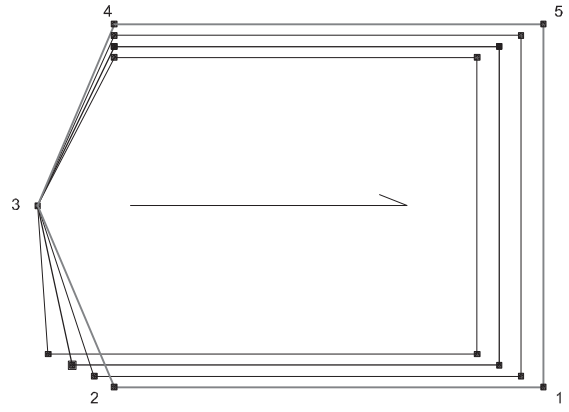
2 Select point 1.

3 Go to Grading menu and select "Copy Grading".

4 Select point 2.

5 Go to Grading menu and select "Paste Grading" and choose "Paste X Grading". (Fig 1).

Fig 1



TASK 3: **Paste 'Y' grading.**

1 Open the graded pocket pattern file.

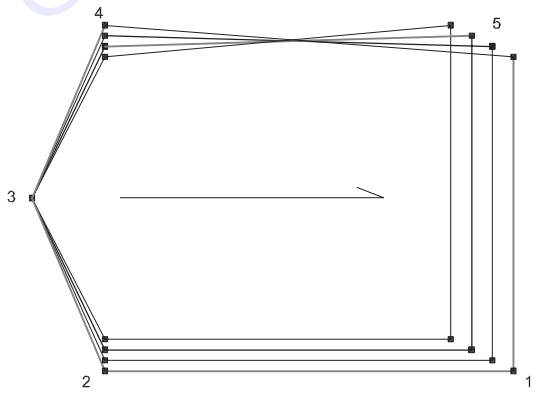
2 Select point 1.

3 Go to Grading menu and select "Copy Grading".

4 Select point 5.

5 Go to Grading menu and select "Paste Grading" and choose "Paste Y Grading". (Fig 1).

Fig 1



TASK 4: **Paste around grading.**

1 Open the graded pocket pattern file.

2 Select point 1.

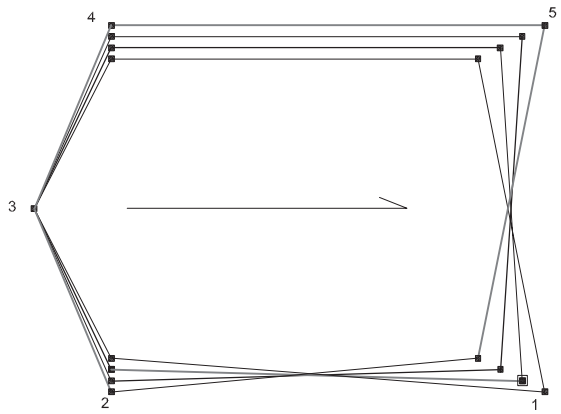
3 Go to Grading menu and select "Copy Grading".

4 Select point 2.

5 Go to Grading menu and select “Paste Grading” and choose “Paste around Grading”. (Fig 1).

Note: Get the work checked by your Instructor.

Fig 1



Practice Grading Options

Objectives : At the end of this exercise, you shall be able to:

- flip 'X' and 'Y' grading
- grade along line
- apply 'zero all', 'zero X' and 'zero Y' grading.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Procedure

TASK 1: **Flip 'X' & 'Y' Grading.**

1 Open the graded pocket pattern file. (Fig.1).

2 Select point 1.

3 Go to Grading menu and select "Flip Grading" and choose "Flip X Grading". (Fig.2).

Fig 1

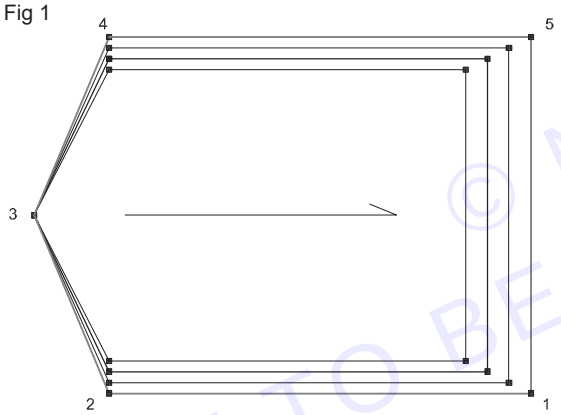
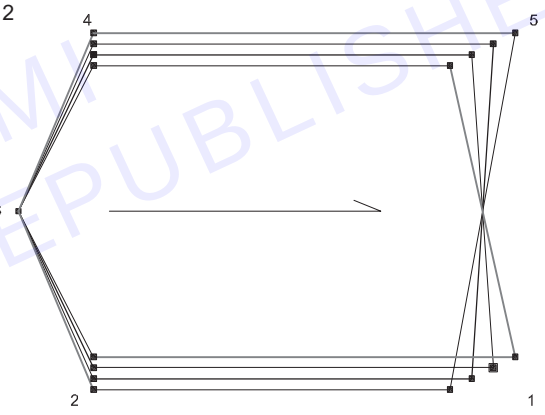


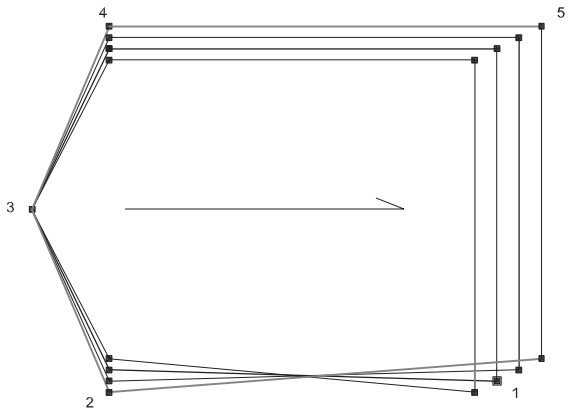
Fig 2



4 Go to Edit menu and click "Undo".

5 Go to Grading menu and select "Flip Grading" and choose "Flip Y Grading". (Fig 3).

Fig 3

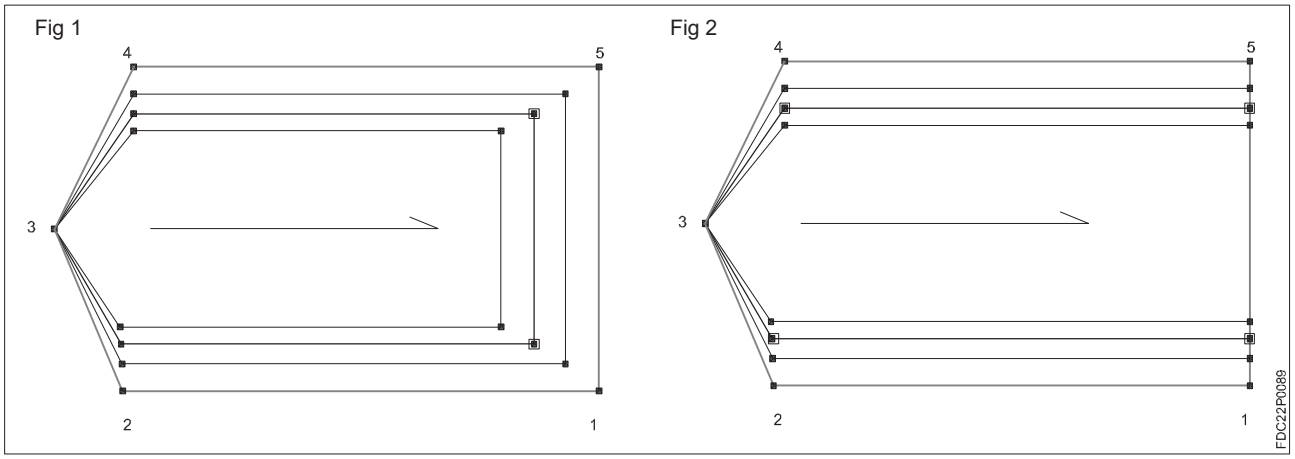


TASK 2**: Grade along line**

1 Open the graded pocket pattern file. (Fig 1).

2 Select the line 1-5 using selection tool.

3 Go to Grading menu, select grade and choose “Grade along line”. (Fig 2).

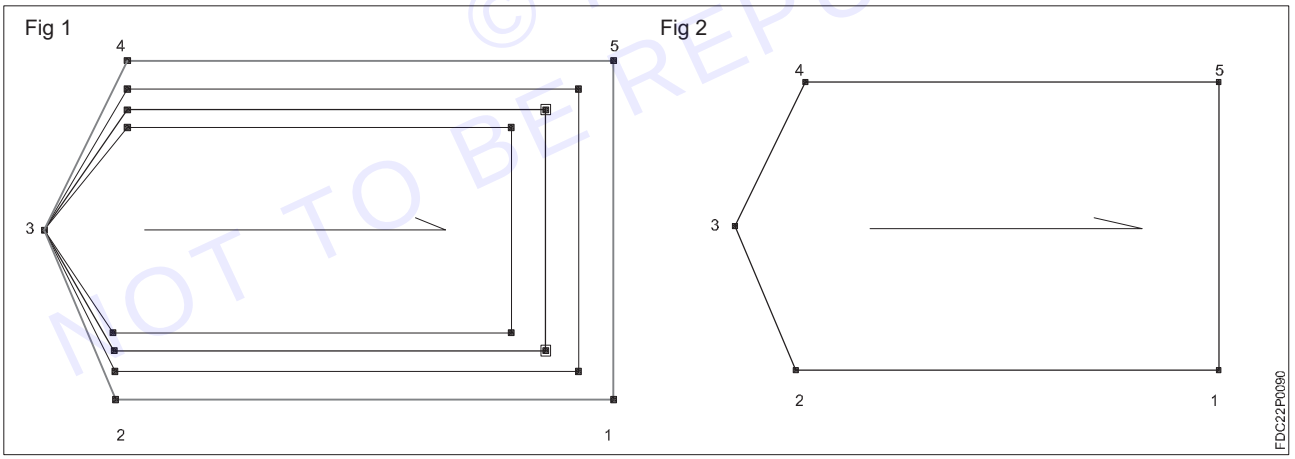


TASK 3: **Apply “Zero All”, “Zero X” and “Zero Y” Grading**

1 Open the graded pocket pattern file. (Fig 1).

2 Go to Grading menu, select Zero Grading and choose “Zero All Grading”. (Fig 2).

3 Goto Edit menu and select “Undo”.



4 Go to Grading menu, select Zero Grading and choose “Zero X Grading”. (Fig 3).

5 Goto Edit menu and select “Undo”.

6 Go to Grading menu, select Zero Grading and choose “Zero Y Grading”. (Fig 4).

Note: Get the work checked by your Instructor.

Fig 3

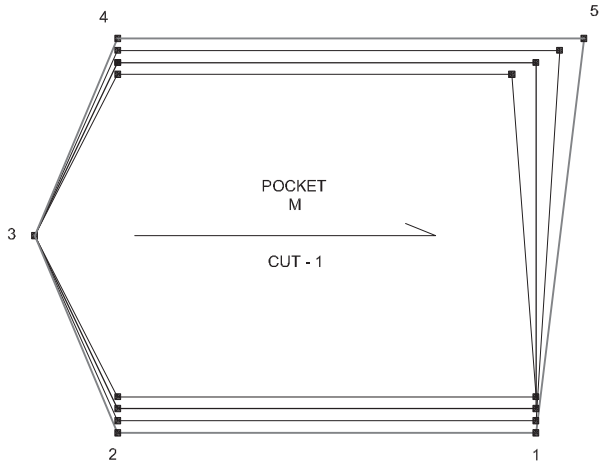
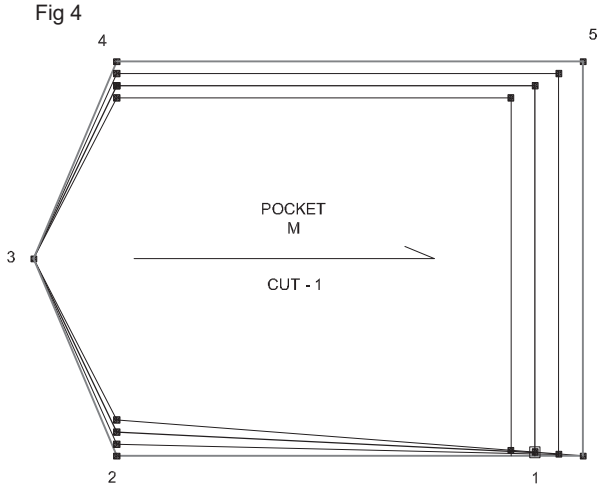


Fig 4



FDC22P0091

Grade a 'T' Shirt

Objectives : At the end of this exercise, you shall be able to:

- grade a 'T' shirt front pattern
- grade a 'T' shirt back pattern
- grade a 'T' shirt sleeve pattern.

Requirements

Tools/Instruments

- Computer with software for Pattern Making (Latest Version) - 1 No.

Materials

- Measurement Charts for a 'T' Shirt. - 1 No.

Procedure

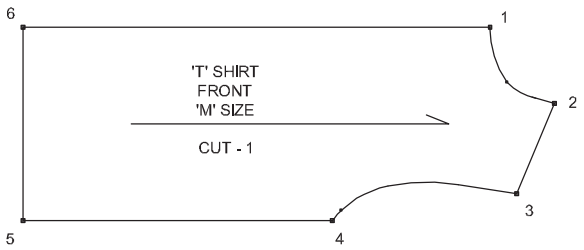
TASK 1: **Grade a 'T' Shirt Front Pattern**

1 Collect the required measurement chart of a 'T' Shirt for at least 4 no. of sizes. (Refer Previous Exercise)

2 Open the required 'T' Shirt Front Pattern.

3 Number the pattern corners as 1,2,3,4,5 & 6. (Fig 1).

Fig 1



FDC22P0092

4 Click point 1 by selection tool.

5 Goto "Edit" menu and select "Point Attributes".

6 Select grading point to convert the normal point into grading point.

7 Repeat the above process for other points also.

8 Goto "Grading" menu.

9 Select 'sizes".

10 Click “insert” in the box.

11 Insert the sizes ‘L’ and ‘XL’.

12 Click “append” in the box. 1

13 Type the size ‘S”.

14 Click the colour box and select suitable colour for each size.

15 Click the close button.

16 Goto “View” menu. Select “Grading”. Select “Grading Table”.

17 Calculate the grading increments for each point and prepare the grading increment table.

Sizes	M to S		M to L		L to XL	
Point	X	Y	X	Y	X	Y
1	-0.5	0	+0.5	0	+0.5	0
2	-1	+0.5	+1	-0.5	+1	-0.5
3	-1	+1	+1	-1	+1	-1
4	0	+1	0	-1	0	-1
5	+1	+1	-1	-1	-1	-1
6	+1	0	-1	0	-1	0

18 Click the point 1 with the help of the selection tool.

Mention the grading increments for all the sizes, observe the point 1 has been graded for the all the sizes. (Fig 2).

19 Apply the grading increments for the point 2. (Fig 3).

Fig 2

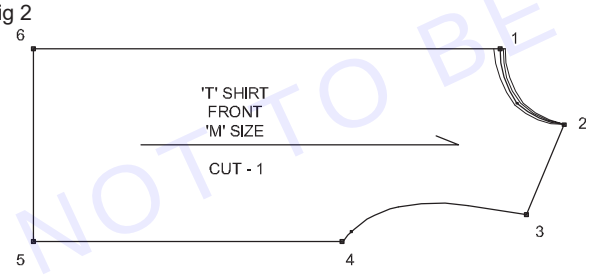
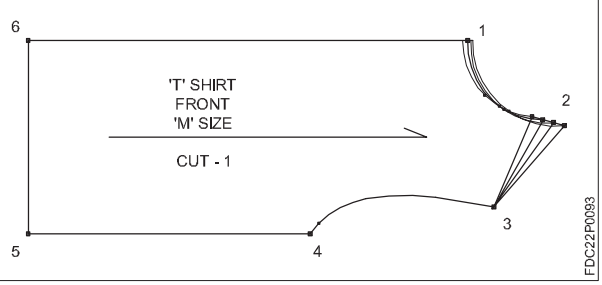


Fig 3



20 Apply the grading increments for the point 3. (Fig 4).

21 Apply the grading increments for the point 4. (Fig 5).

Fig 4

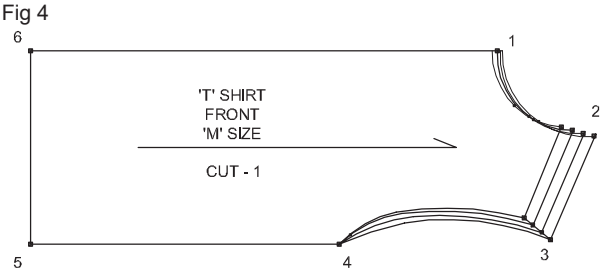
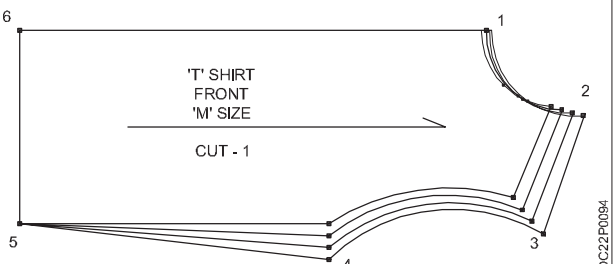


Fig 5



22 Apply the grading increments for the point 5. (Fig 6).

23 Apply the grading increments for the point 6. (Fig 7).

Fig 6

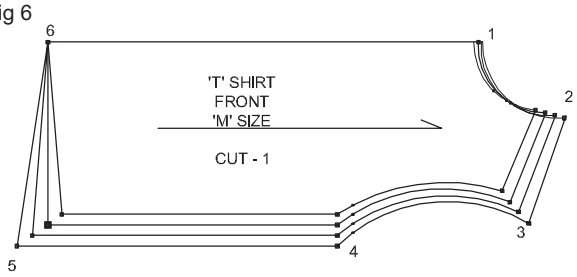
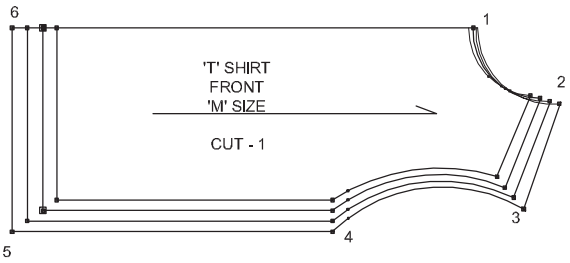


Fig 7



24 Save the file in the proper folder.

TASK 2: **Grade a 'T' Shirt Back Pattern**

1 Open the required 'T' Shirt Back Pattern.

2 Number the pattern corners as 1,2,3,4,5 & 6.

3 Click point 1 by selection tool.

4 Go to "Edit" menu and select "Point Attributes".

5 Select grading point to convert the normal point into grading point.

6 Repeat the above process for other points also.

7 Create sizes S,L & XL with suitable identification colours.

8 Open the grading table.

9 Calculate the grading increments for each point and prepare the grading increment table.

Sizes	M to S		M to L		L to XL	
Point	**X**	**Y**	**X**	**Y**	**X**	**Y**
1	-1	0	+1	0	+1	0
2	-1	+0.5	+1	-0.5	+1	-0.5
3	-1	+1	+1	-1	+1	-1
4	0	+1	0	-1	0	-1
5	+1	+1	-1	-1	-1	-1
6	+1	0	-1	0	-1	0

10 Apply the grading increments for point 1. (Fig 1.).

11 Apply the grading increments for the point 2. (Fig 2).

Fig 1

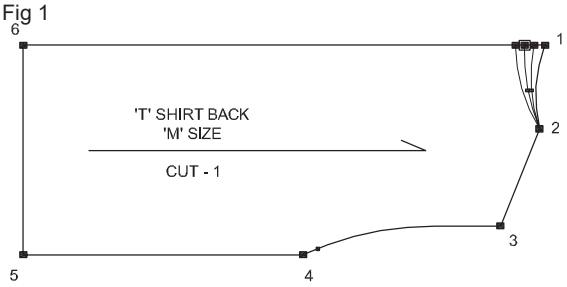
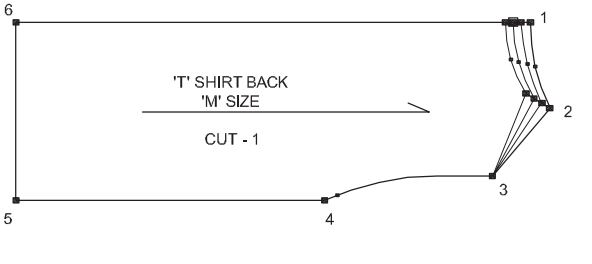
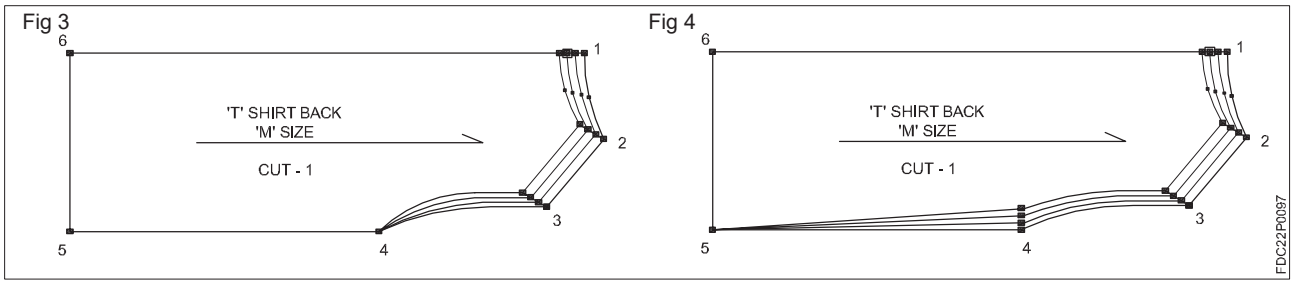


Fig 2



12 Apply the grading increments for the point 3. (Fig 3).

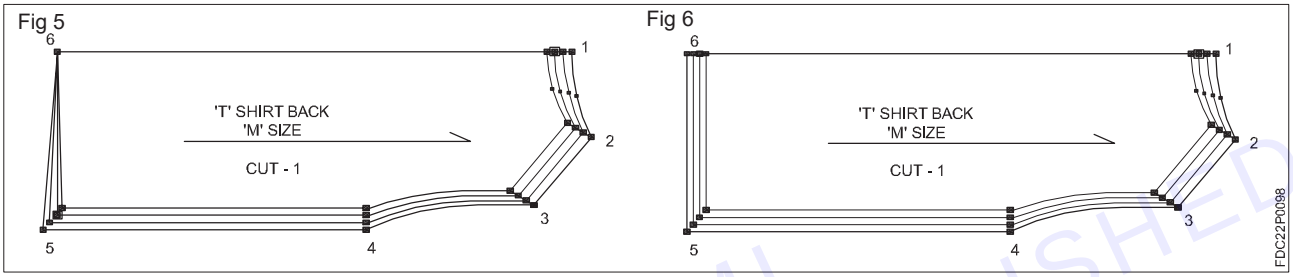
13 Apply the grading increments for the point 4. (Fig 4).



14 Apply the grading increments for the point 5. (Fig 5).

15 Apply the grading increments for the point 6. (Fig 6).

16 Save the file



TASK 3: **Grade a 'T' Shirt Sleeve Pattern**

1 Open the required 'T' Shirt Sleeve Pattern.

2 Name the corners 1,2,3,4 and armhole midlevel as 5. (Fig 1)

3 Convert all the corners in to grading points.

4 Create sizes S,L & XL with suitable identification colours.

5 Open the grading table.

6 Calculate the grading increments for each point and prepare the grading increment table.

Sizes	M to S		M to L		L to XL	
Point	**X**	**Y**	**X**	**Y**	**X**	**Y**
1	0	-1	0	-1	0	+1
2	-1	-1	+1	-1	+1	+1
3	-1	+1	+1	+1	+1	-1
4	0	+1	0	+1	0	-1
5	0	0	0	0	0	0

7 Apply the grading increments for point 1,2,3,4(No Grading increments for point 5) (Fig 2)

Note: Get the work checked by your Instructor.

Fig 1

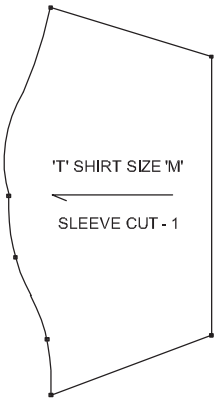
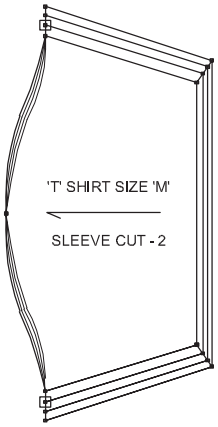


Fig 2



FDC22P0099

Draft Ladies Bodice Block

Objectives : At the end of this exercise you shall be able to

- draft Ladies' Bodice Block.

Requirements

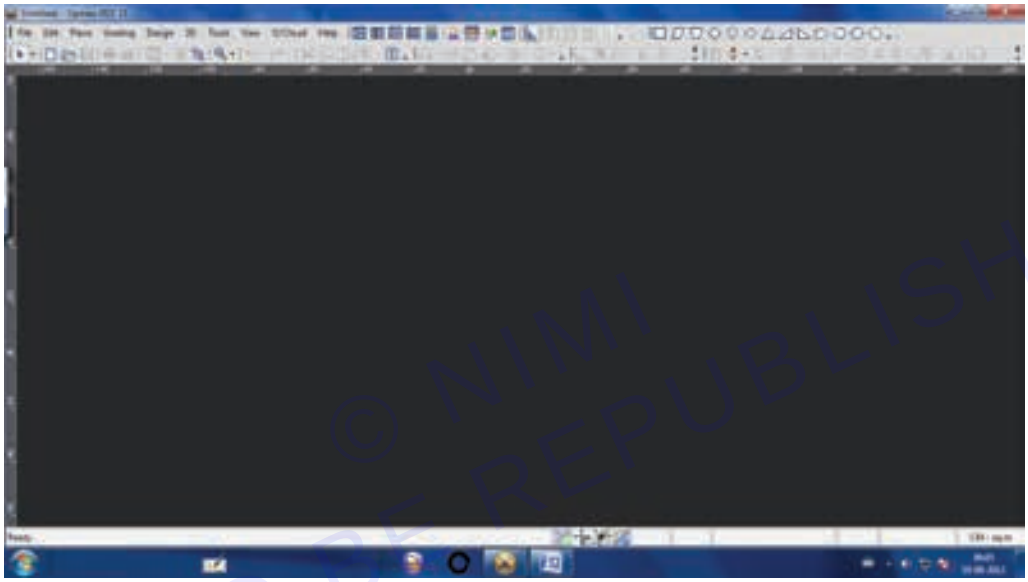
Tools/materials

- Computer with Software for Pattern Making (Latest Version) - 1 No.

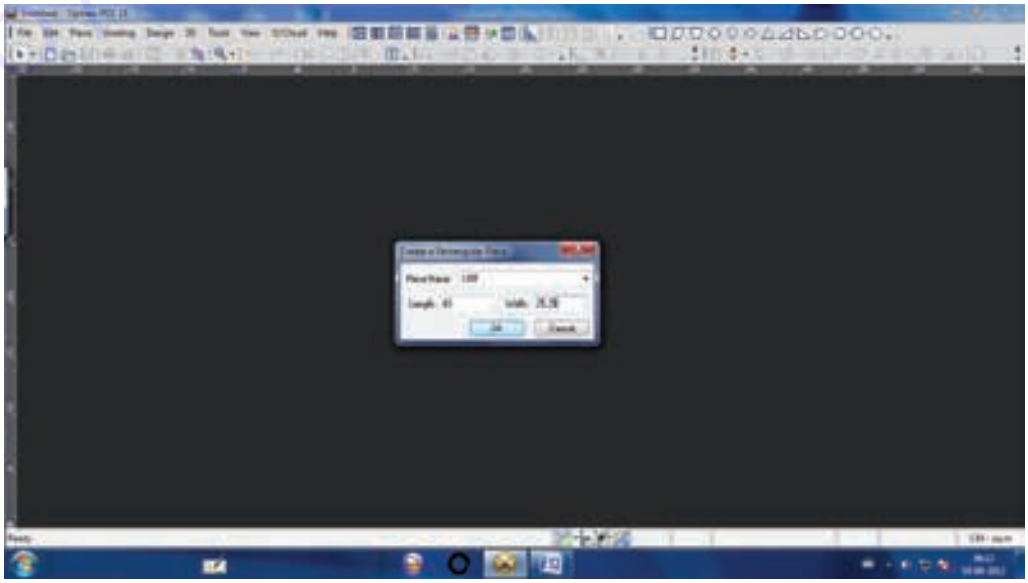
Procedure

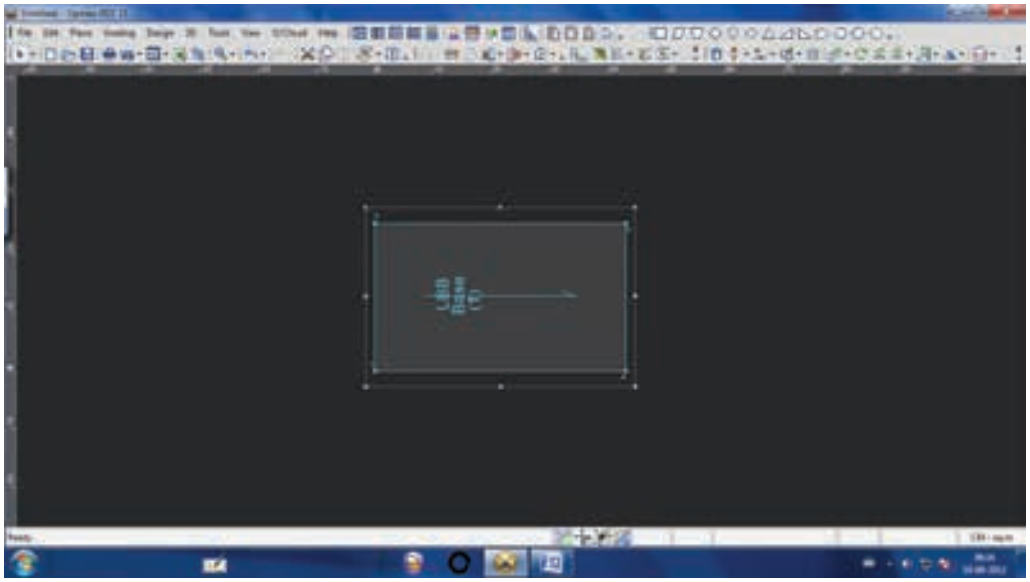
Step 1: Go to File Menu - Click New(Short cut Key Ctrl + N)

New Window Opens

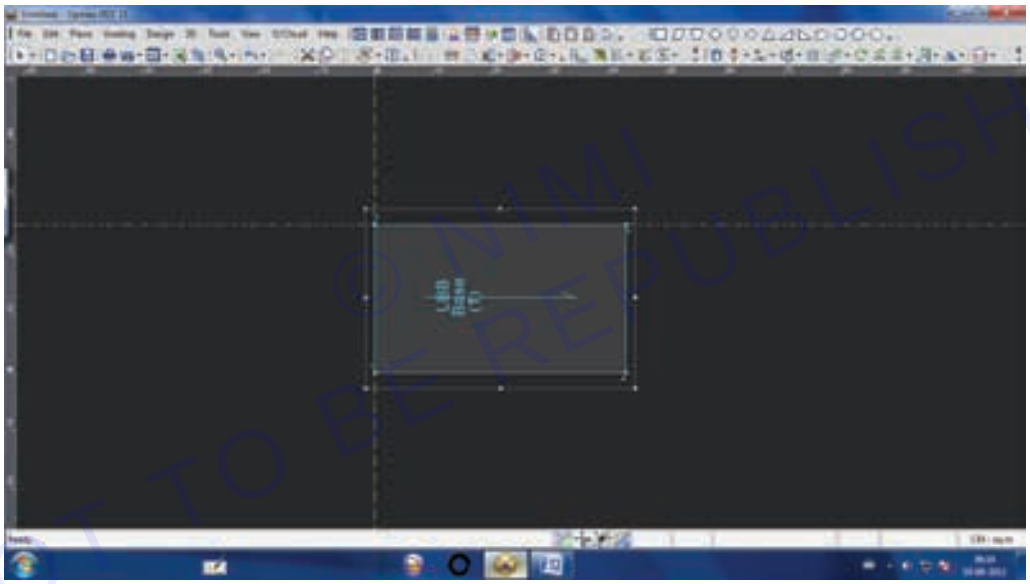


Step 2: Right Click Mouse – Select Create rectangular piece. Fill Piece Name LBB, Length – 43 cm, Width - 25.25 cm, click ok.

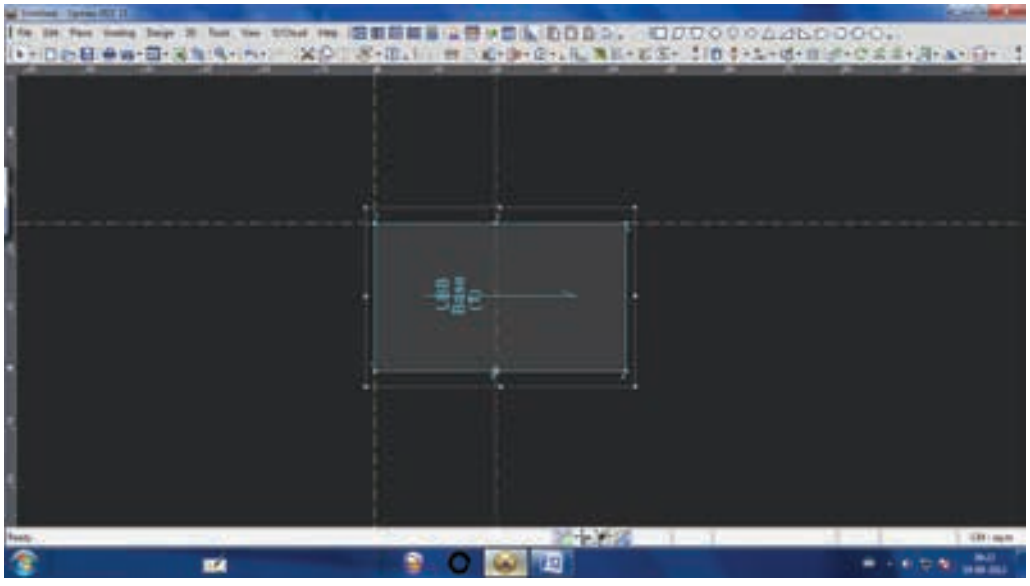




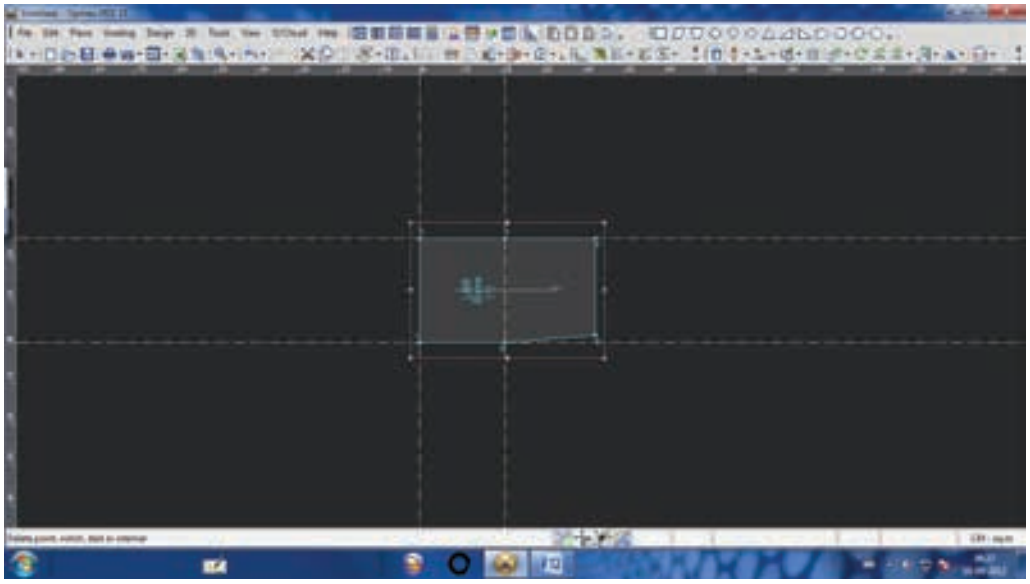
Step 3: Keep Grain line



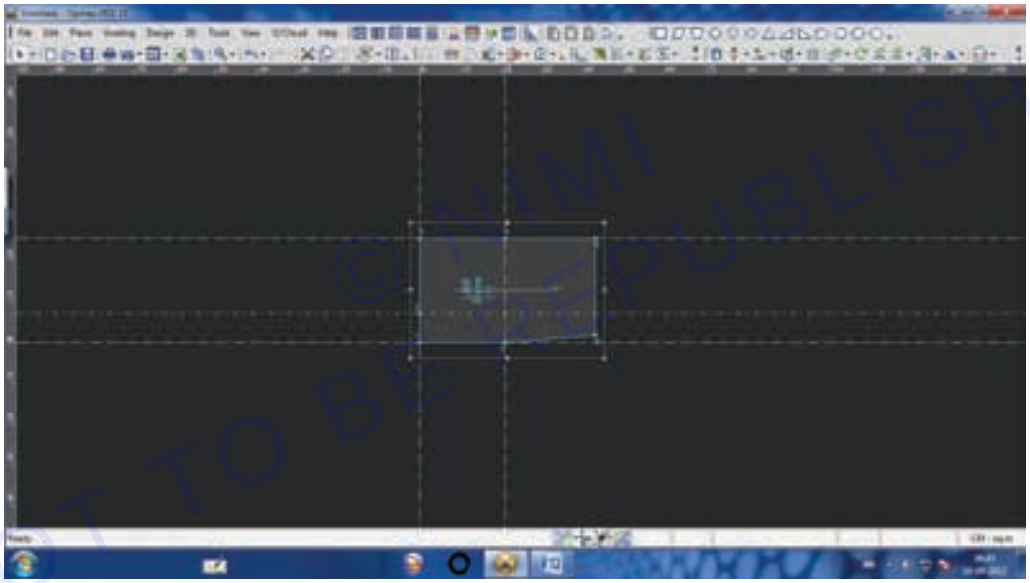
Step 4: Create point (ctrl + O) for chest measurement & keep grain line for Chest line.



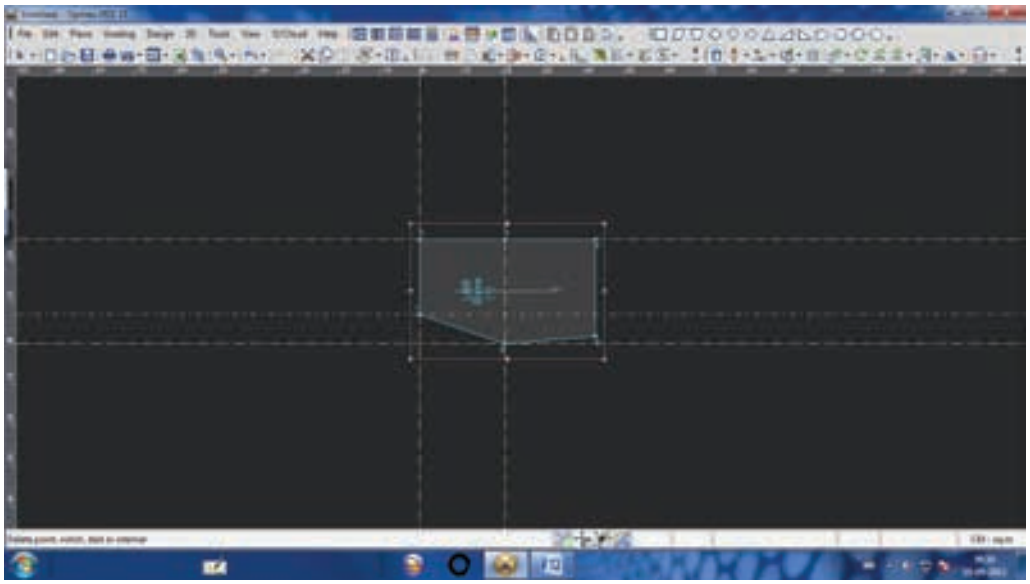
Step 5: Mark 2 cm for waist measurement and delete the extra point to give waist shape.

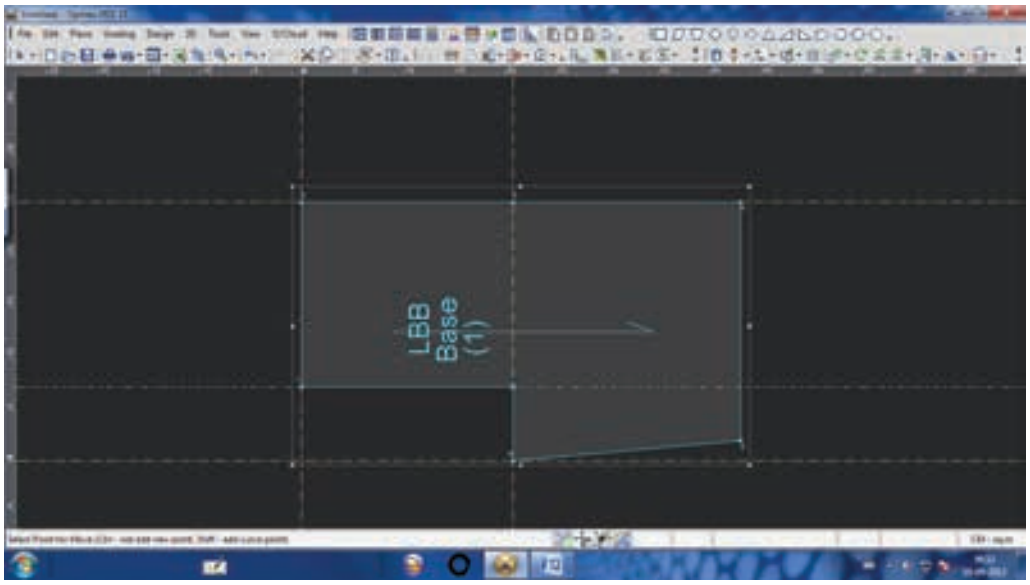


Step 6: Keep Guideline for ½ Shoulder measurement and mark the Point.

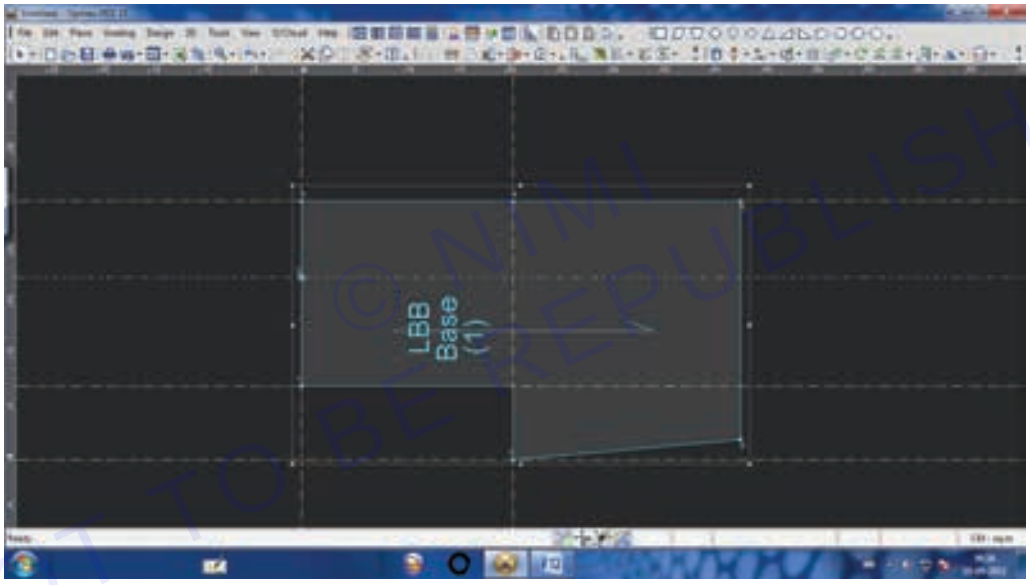


Step 7: Delete the extra shoulder point.

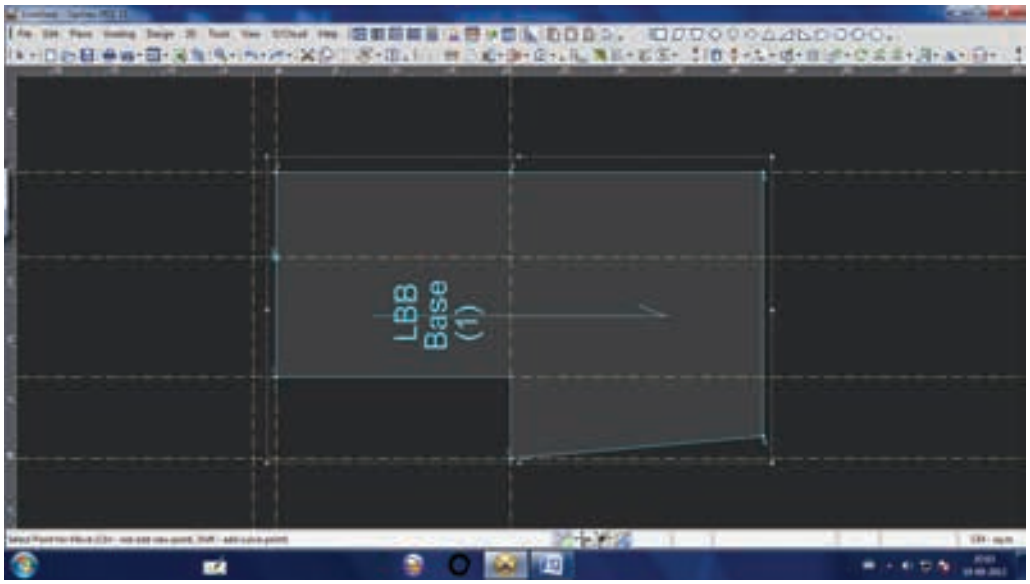




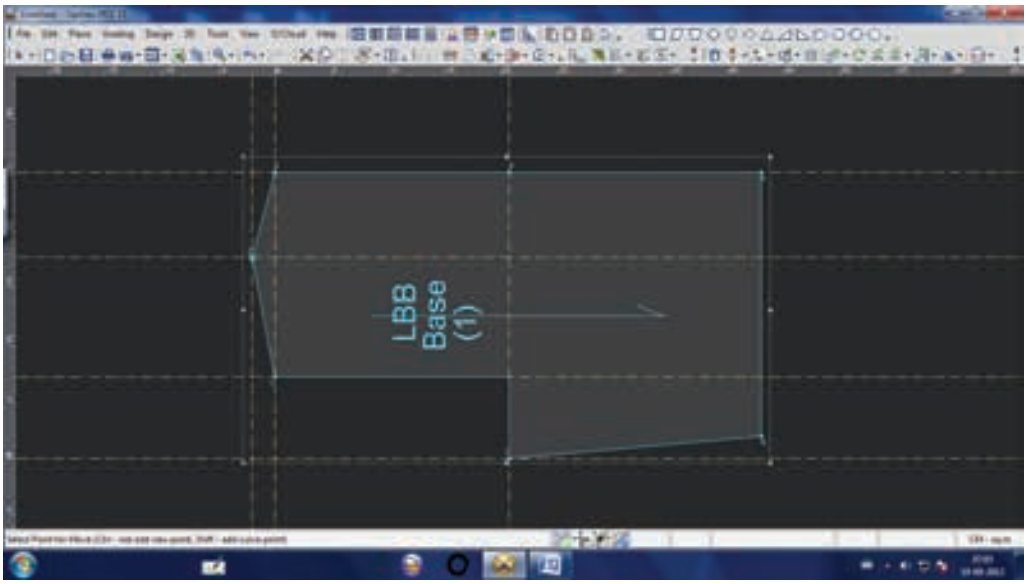
Step 8: Mark the Back Neck width measurement and add point and guideline to it



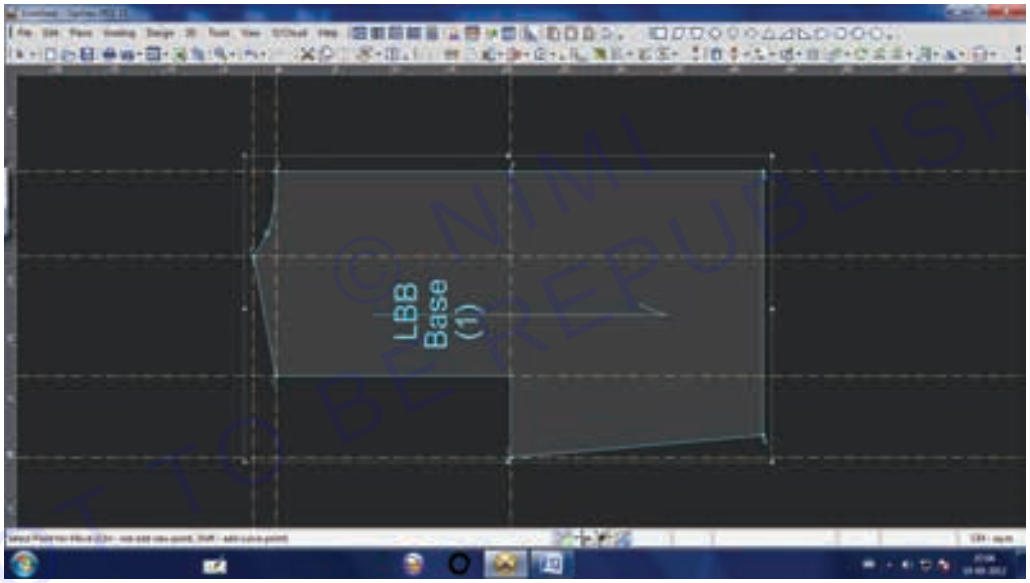
Step 9: Raise the Back Neck height by 2 cm use guideline for accurate measurement



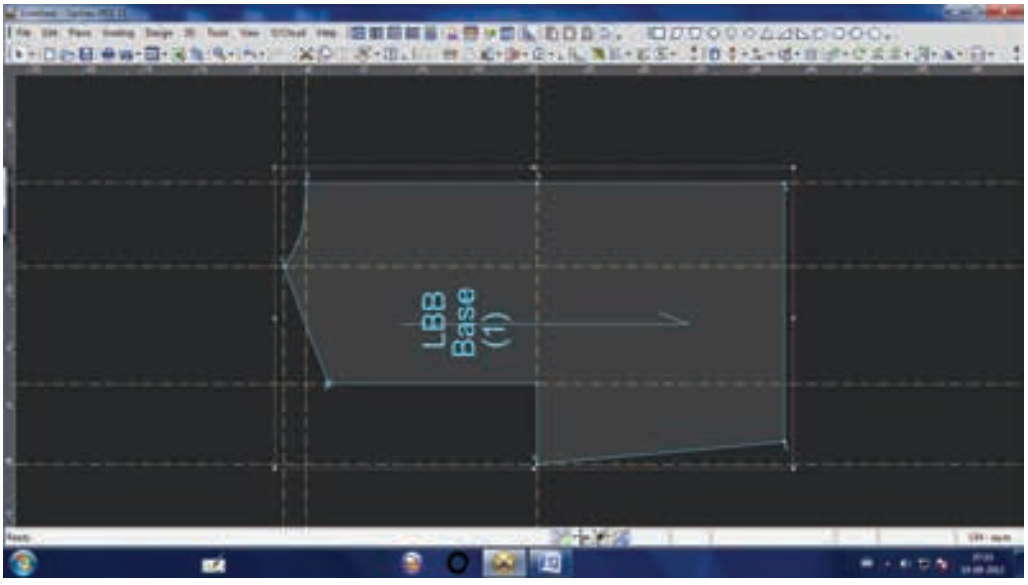
Step 10: Use Move Point (ctrl+M) to rise the Back neck

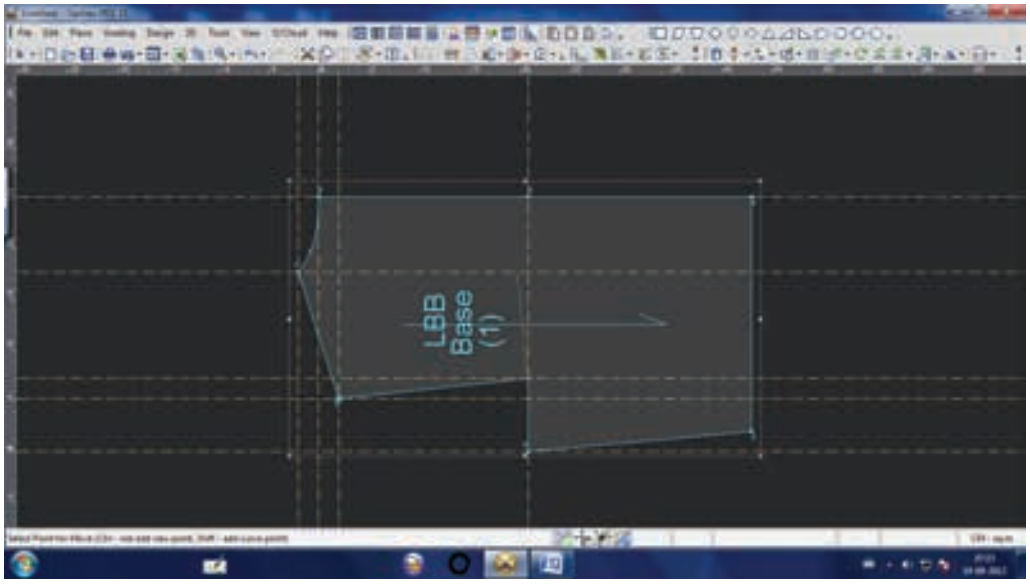


Step 11: Give Back neck curve shape (ctrl +M & shift)

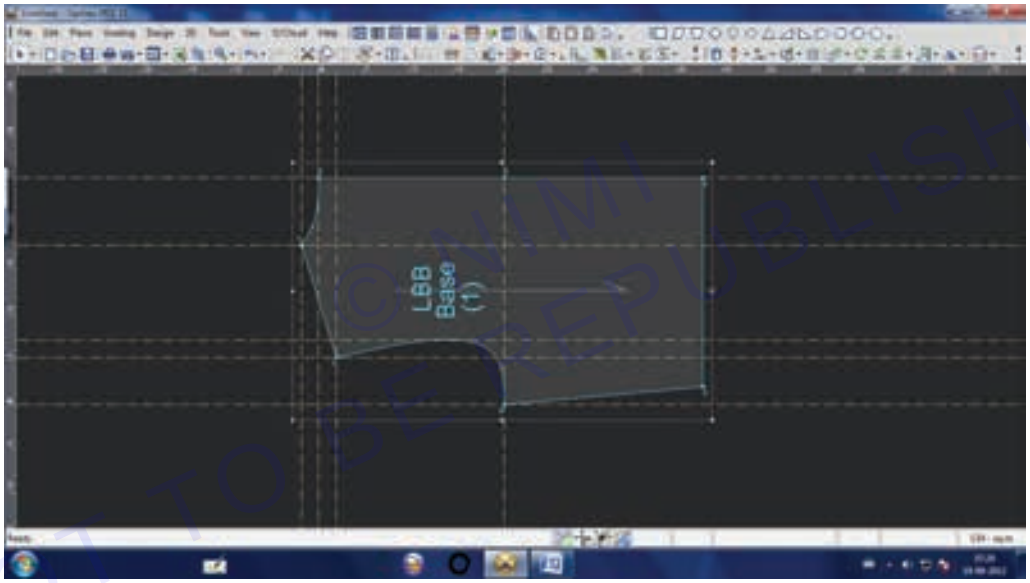


Step 12: Give Shoulder slope 2 cm using move point.

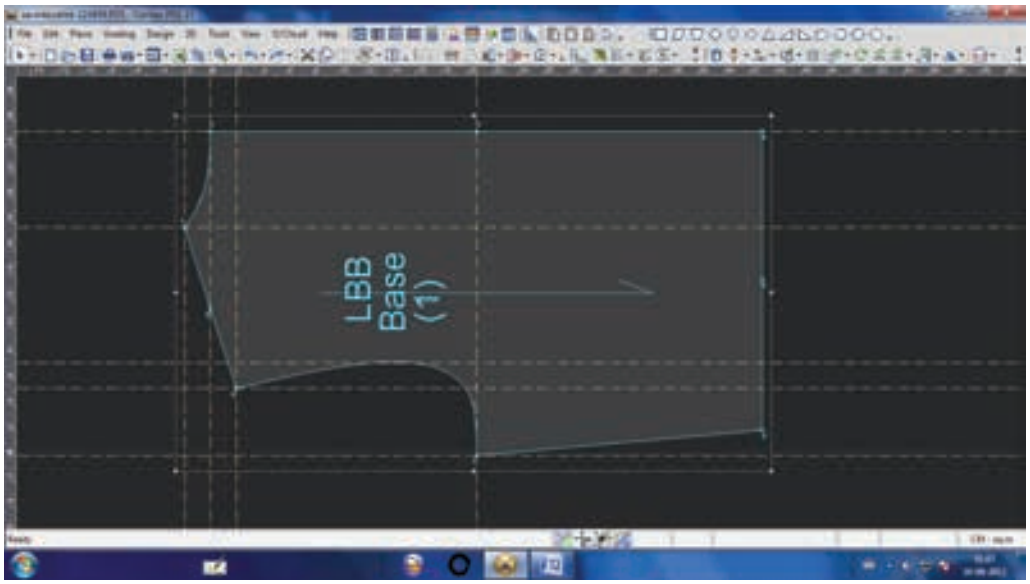




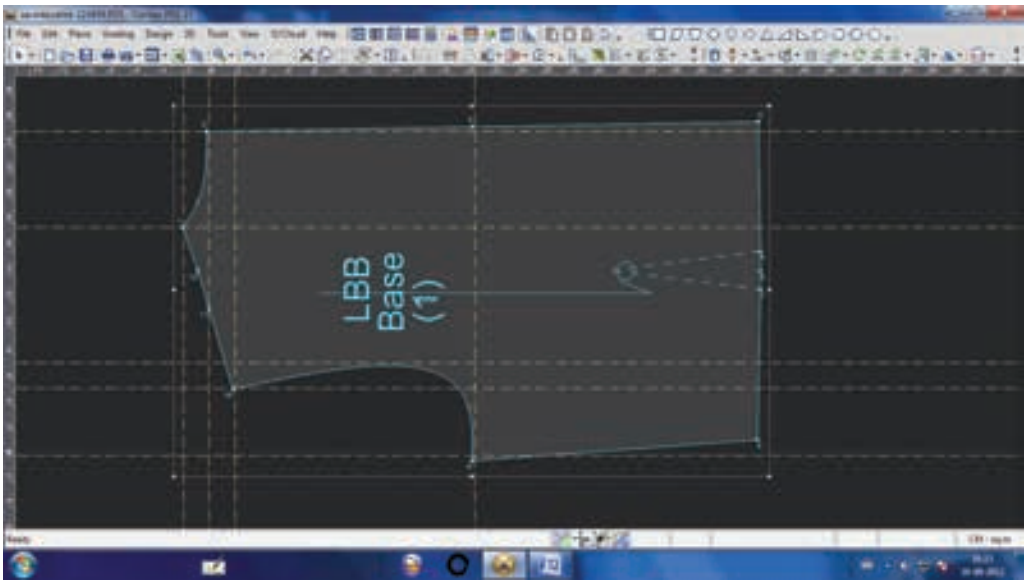
Step 13: Give armhole shape



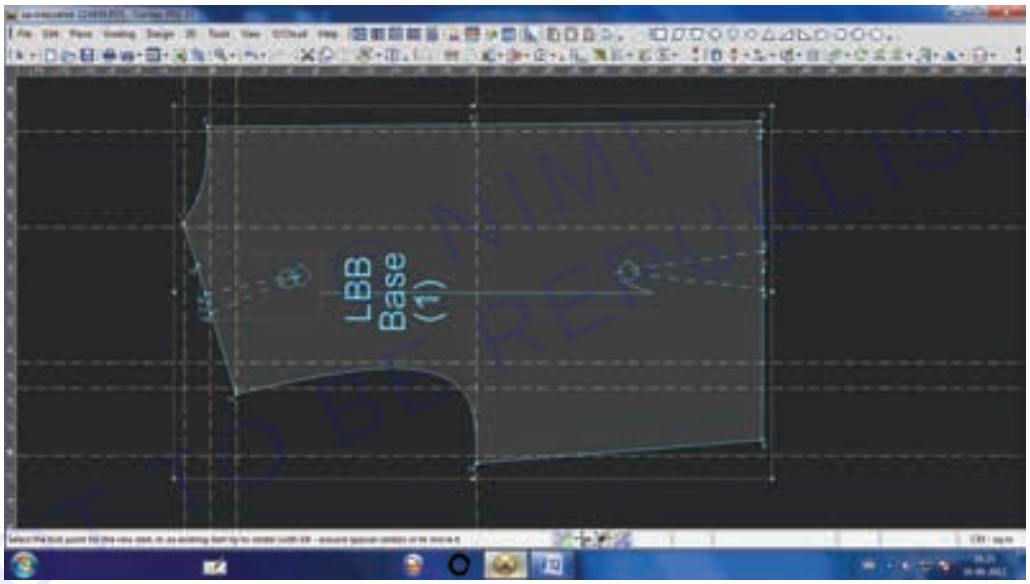
Step 14: Mark the Dart Placement in shoulder& chest



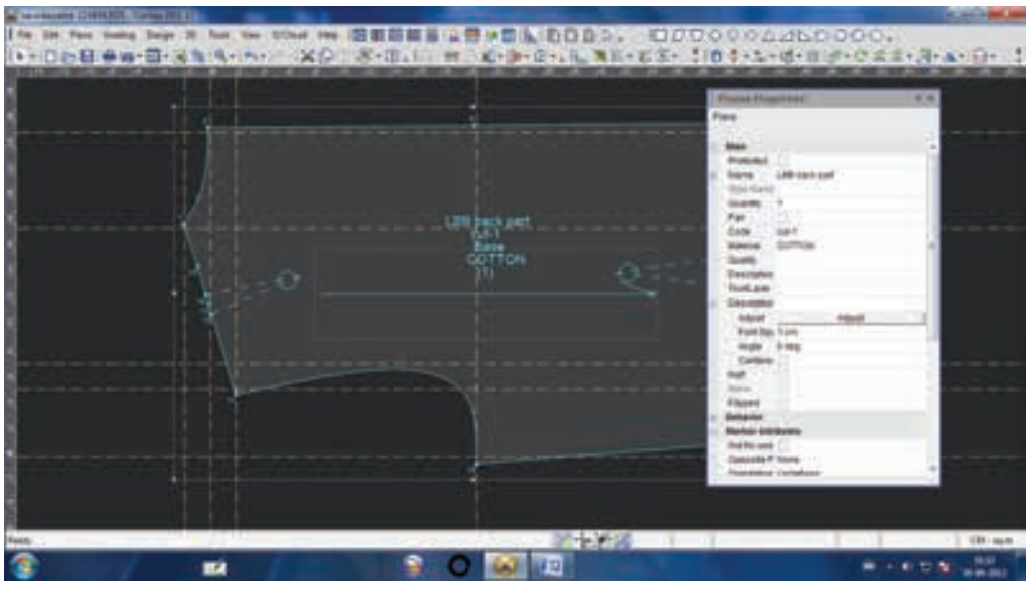
Step 15: Create waist dart (Ctrl + alt + D) dart length =11.5, dart width=1.5



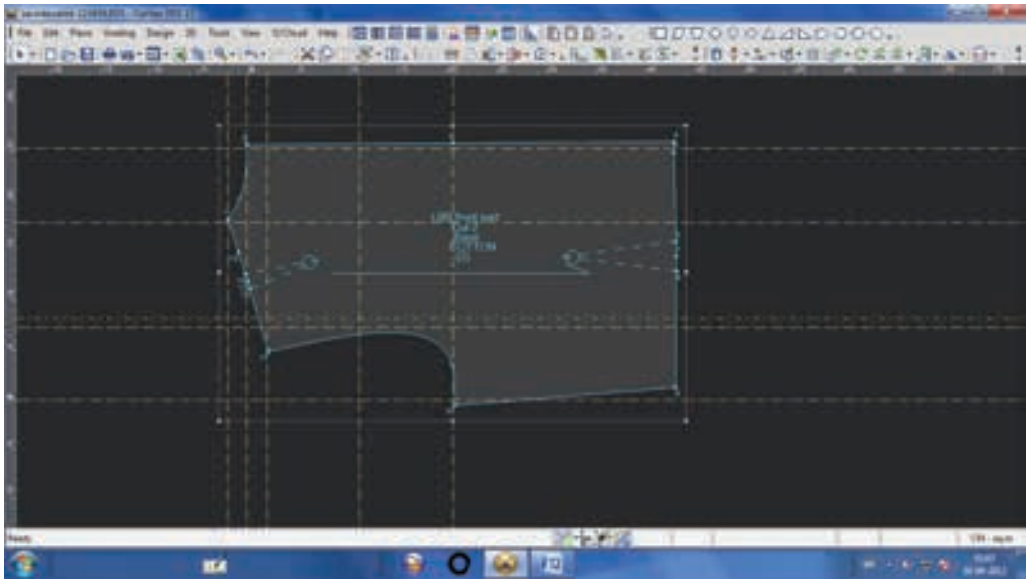
Step 16: Create a shoulder dart (Ctrl + alt + D) dart length =7.5, dart width=o.75



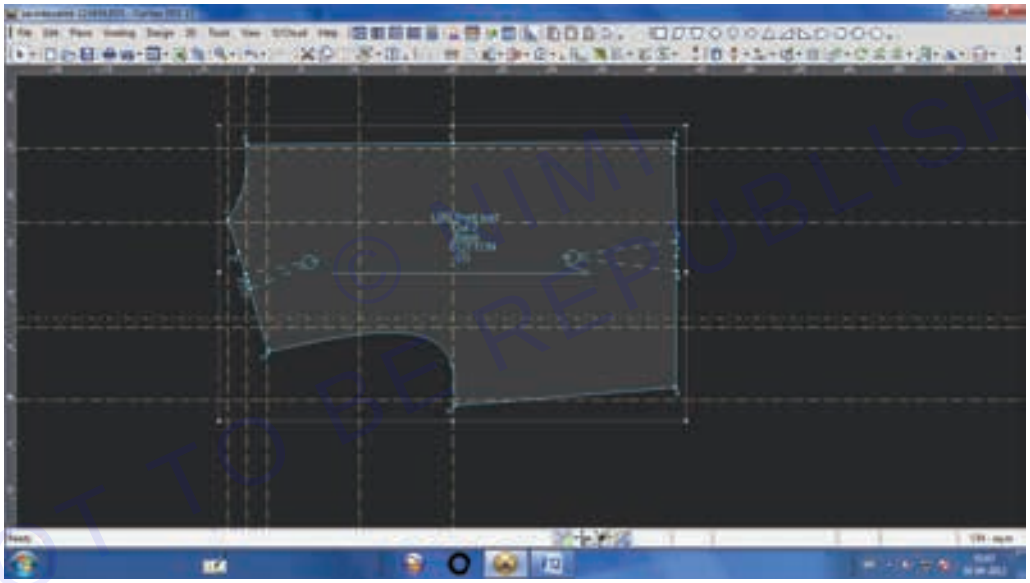
Step 17: Fill all the details in Piece properties table like Piece Name, Quantity, Code, Material etc.



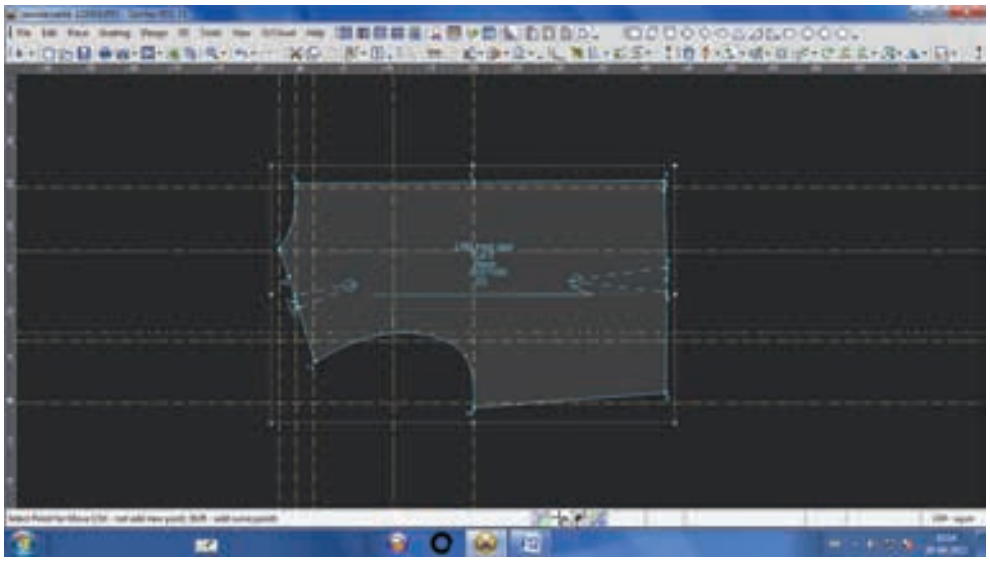
Step 18: Ladies Bodice Block Back part is Created



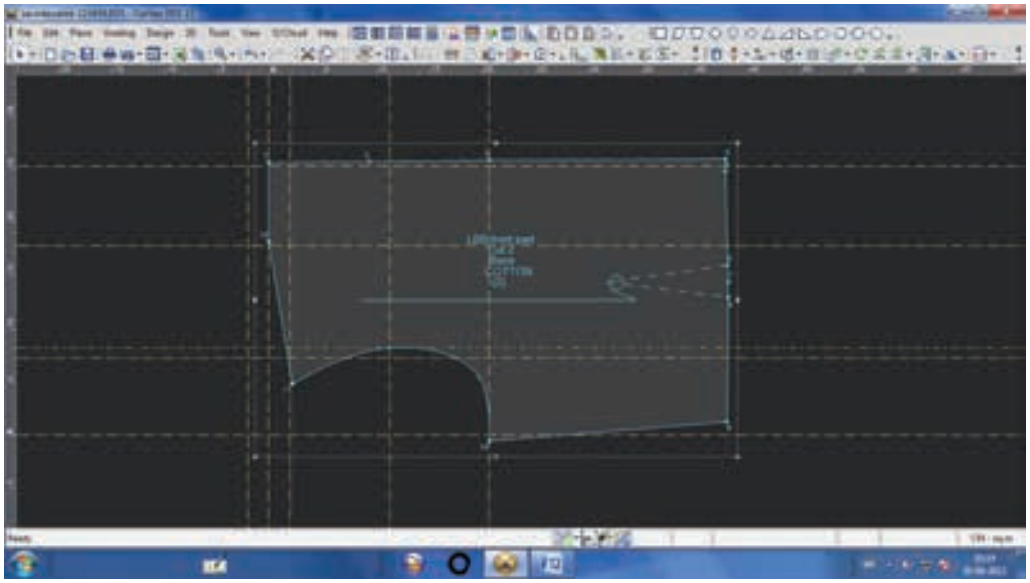
Step 19: Copy & Paste (ctrl + C , ctrl + V)the Back Part to modify it into Front Part



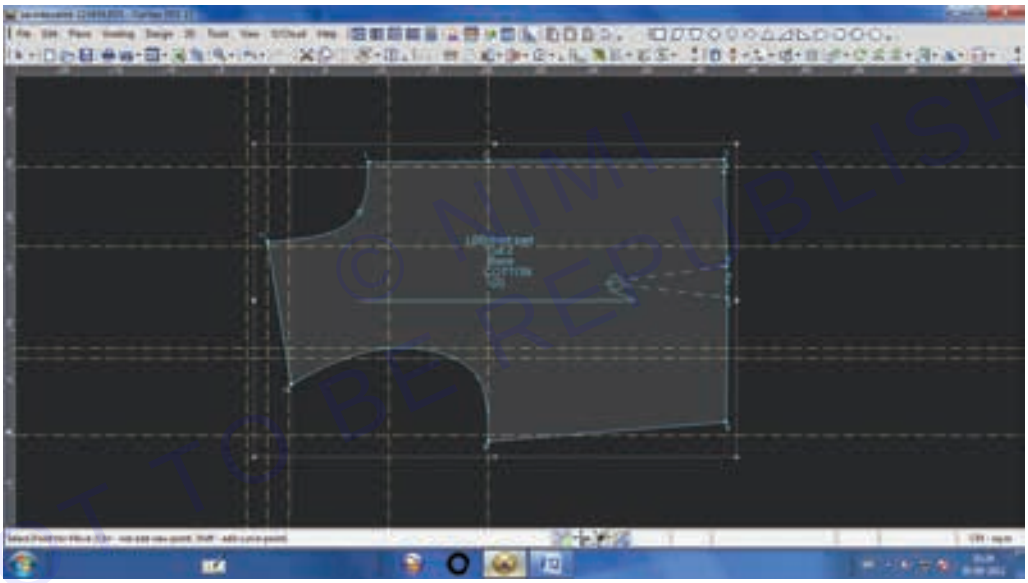
Step 20: Keep guideline 1 cm for Front armhole shape and give armhole front shape using Move point (Shift +Ctrl +M)



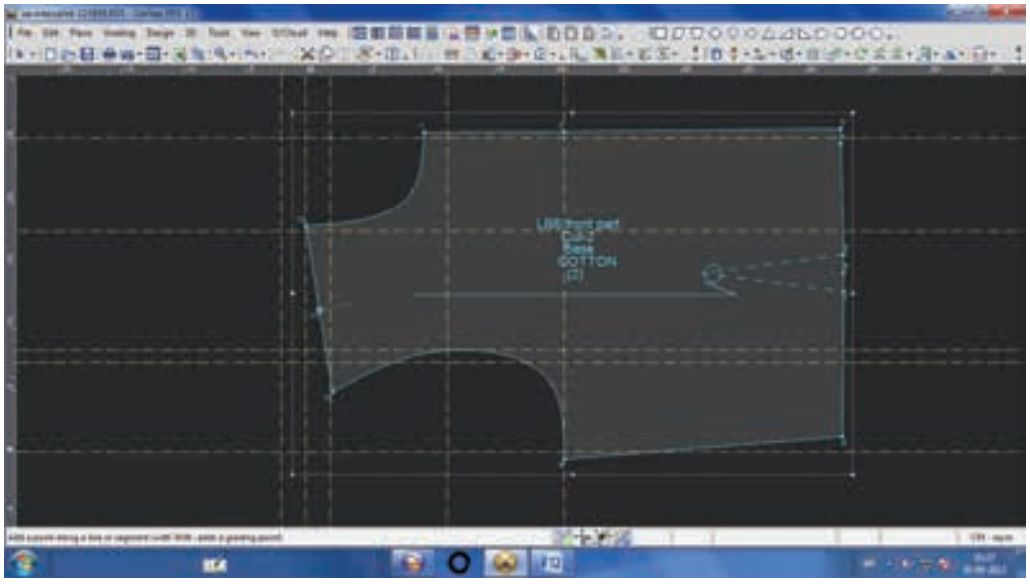
Step 21: Mark and keep Point for front neck width=7 .5cm & front neck depth =9.5cm (ctrl +o)



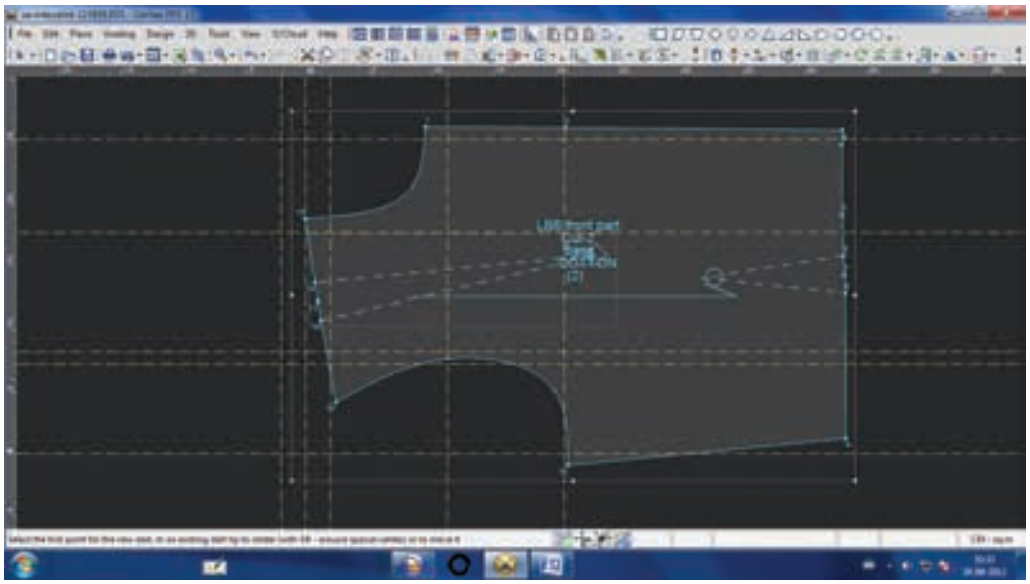
Step 22: Give Front neck shape



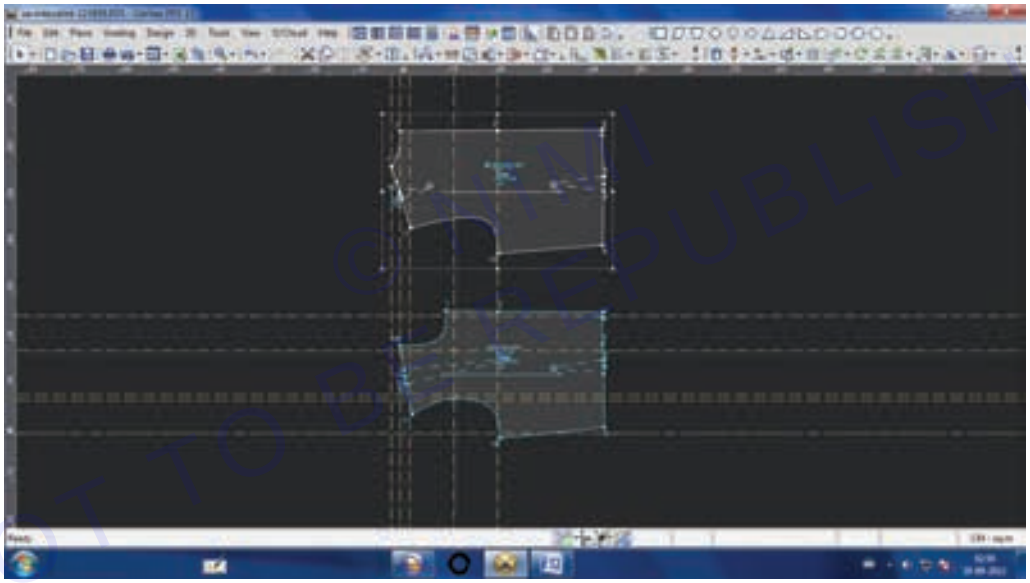
Step 23: Mark Point for Shoulder dart (ctrl +O)



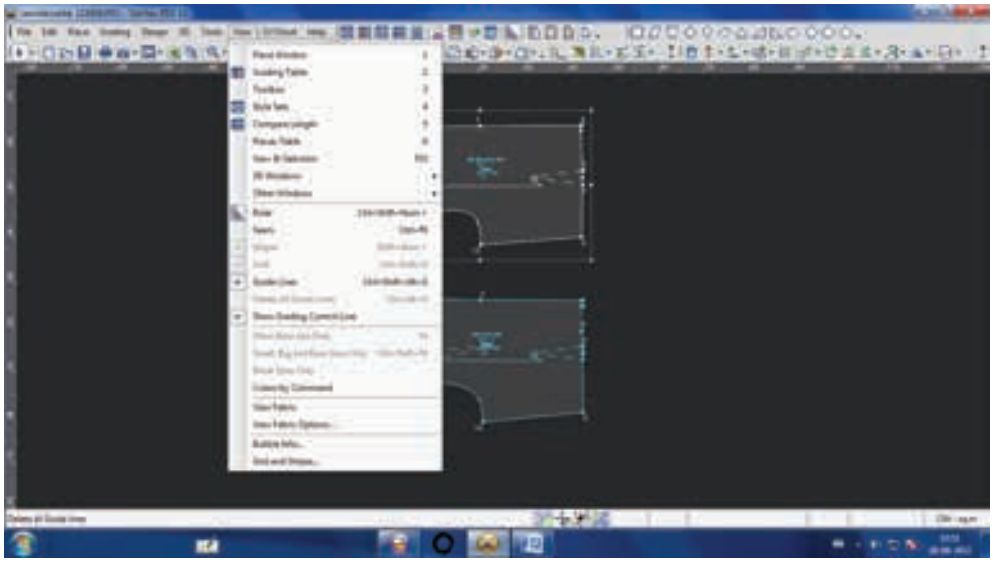
Step 24: Create Shoulder dart using Dart tool (ctrl + alt + D) dart length=22.7 , dart width =1.5



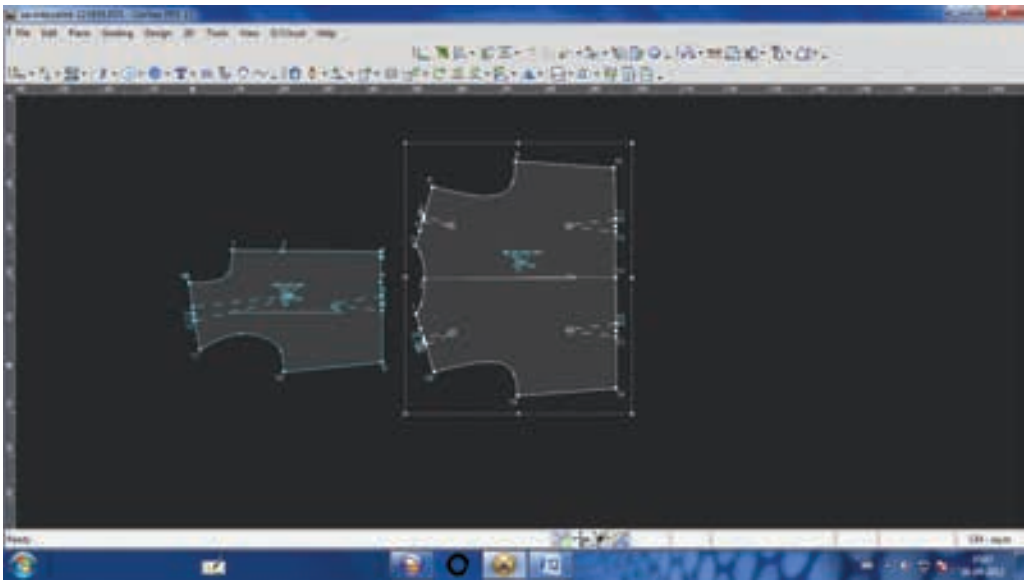
Step 25: Ladies bodice block Front & back part



Step 26: Go to the view and delete all guide lines

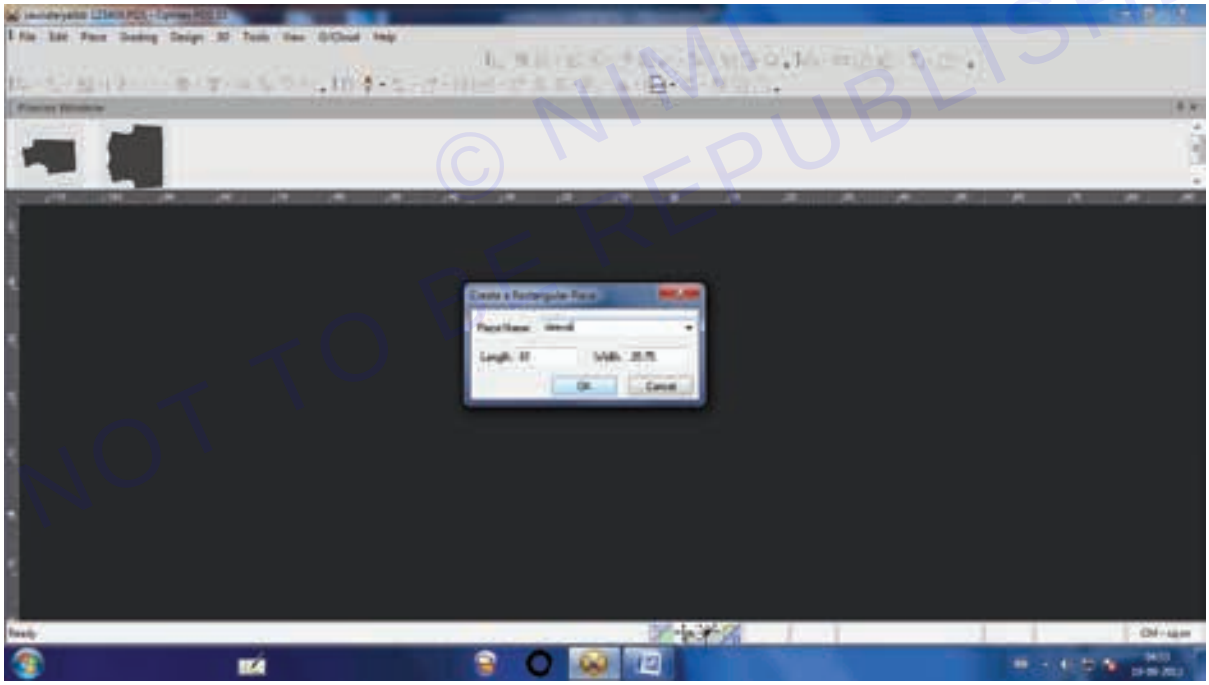


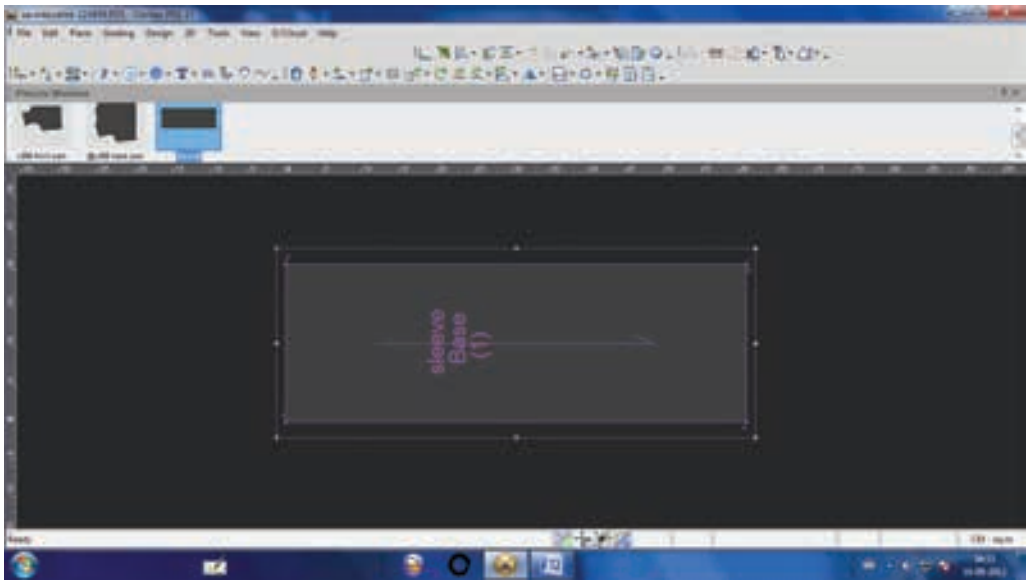
Step 27: Since Back Part is on Fold, to open - Set mirror line (ctrl +alt +H)



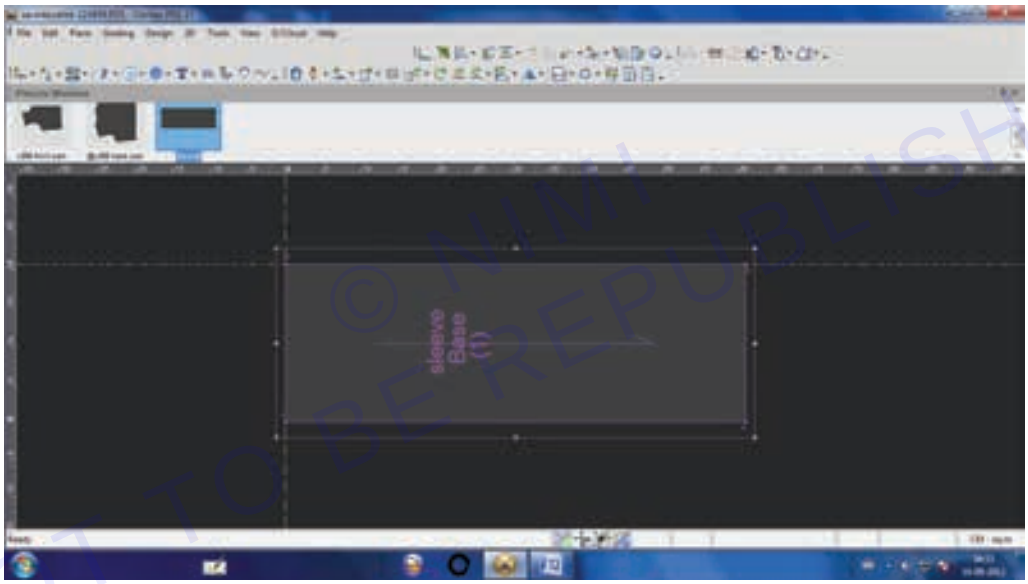
CREATE SLEEVE PATTERN

Step 28: Right Click Mouse – Select Create rectangular piece. Fill Piece Name sleeve, Length – 61 cm, Width - 20.75 cm, click ok.

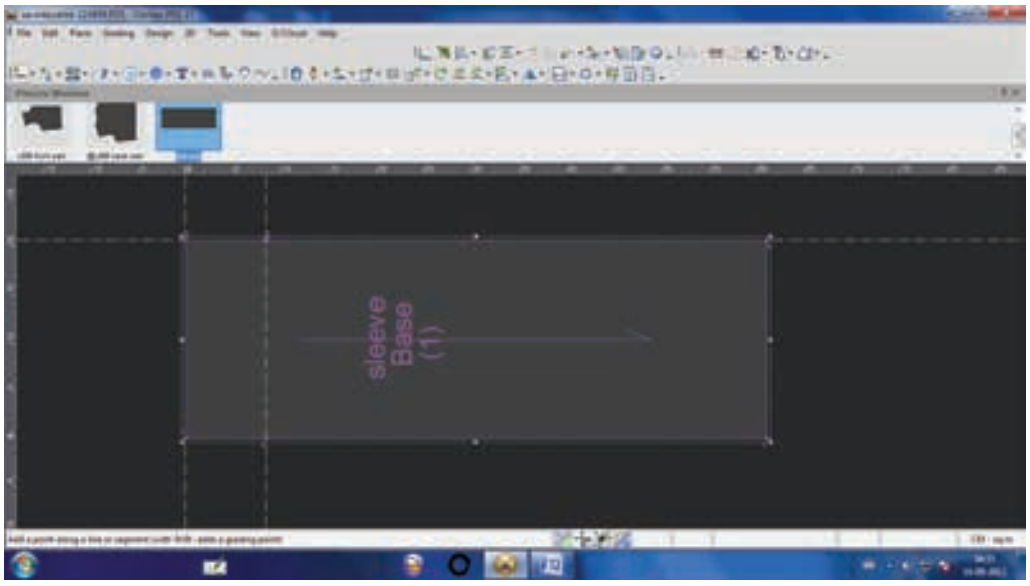




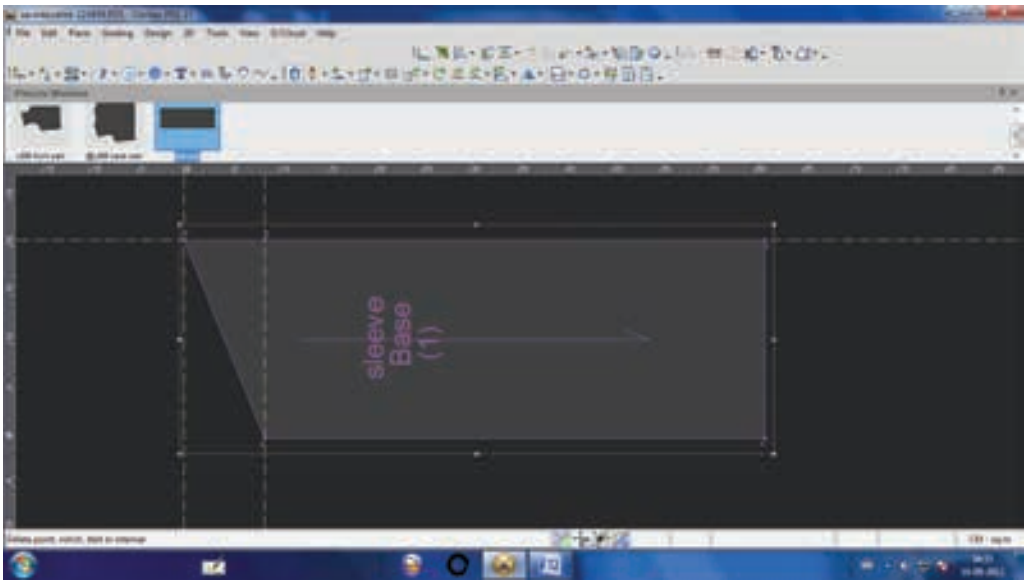
Step 29: Keep guide line



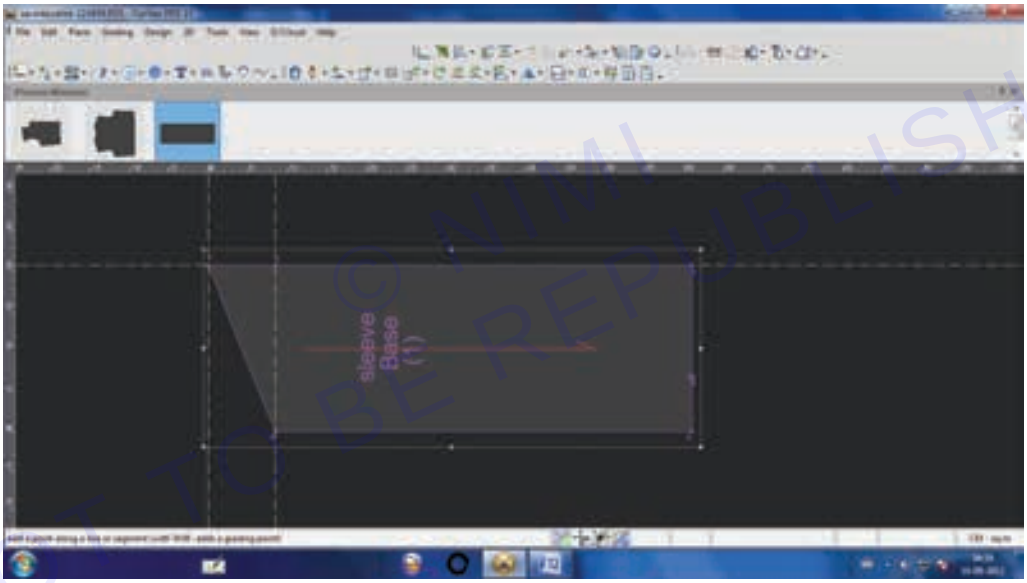
Step 30: Add a point (ctrl + O) at 8.5 cm for sleeve cap / base line, keep a guide line



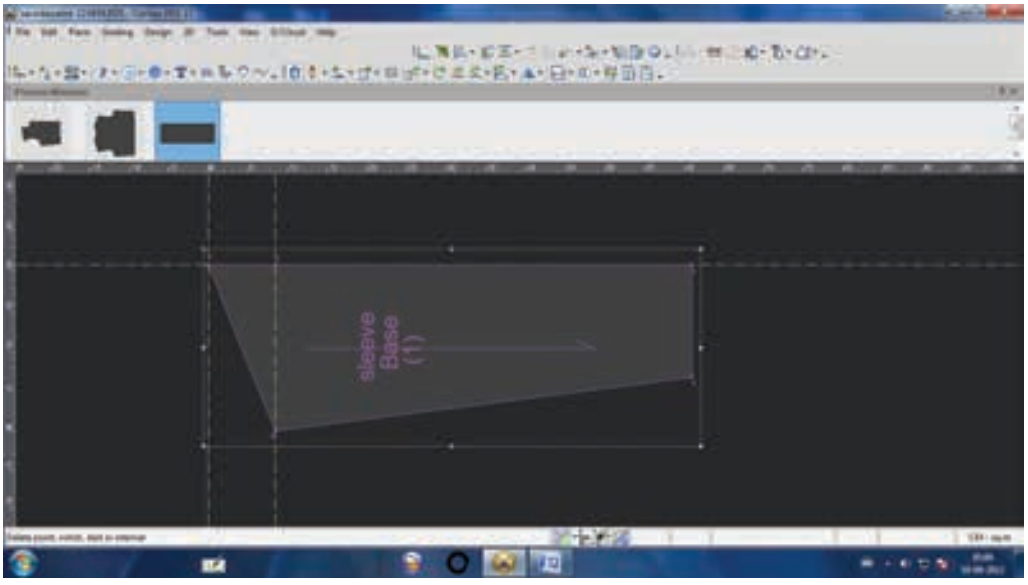
Step 31: delete the extra point to make sleeve crown



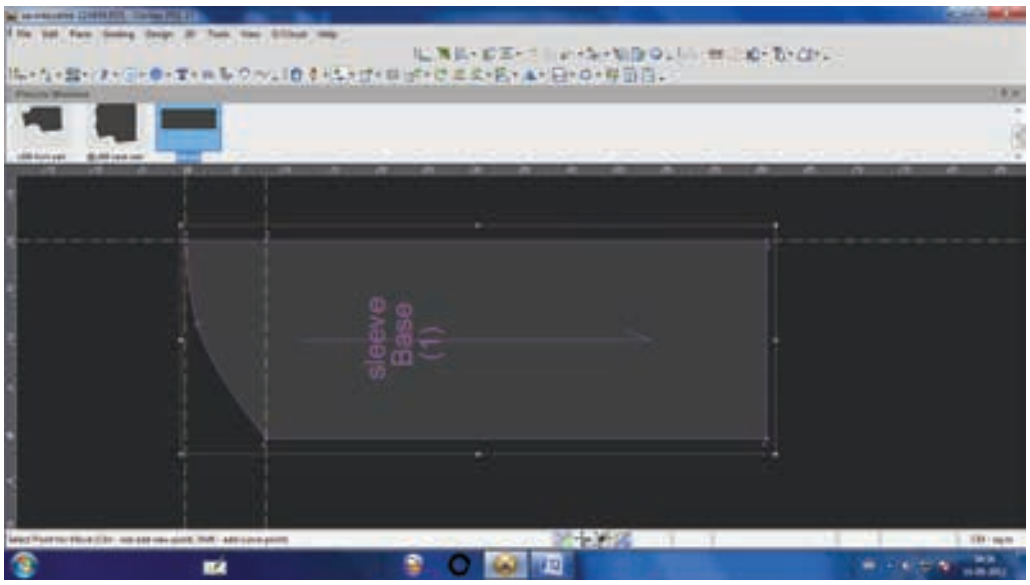
Step 32 : Mark and add a point at the hem as per sleeve bottom round measurement



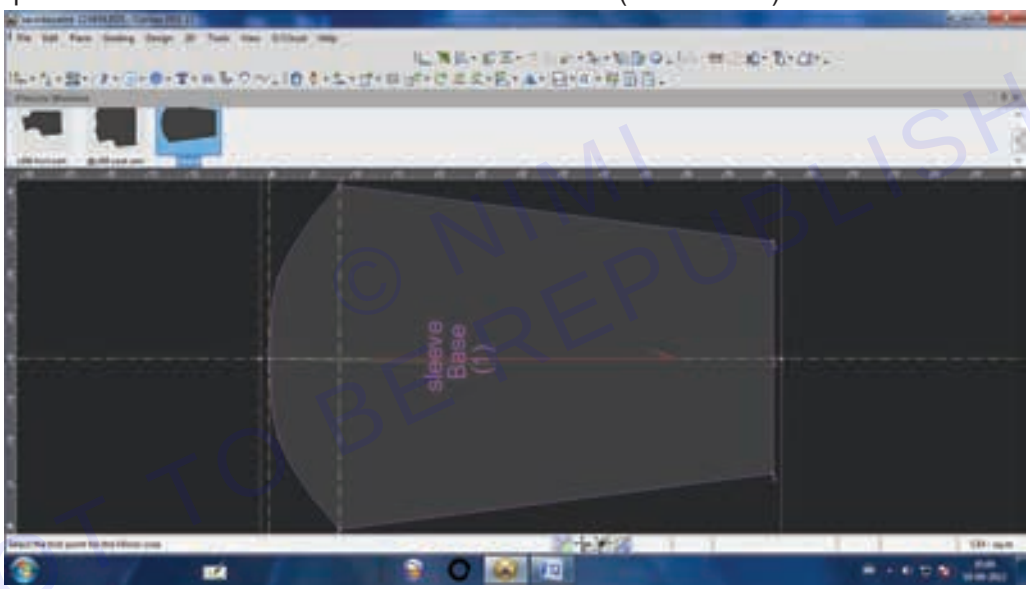
Step 33 : Delete the unwanted point at bottom hem, to give shape of underarm.



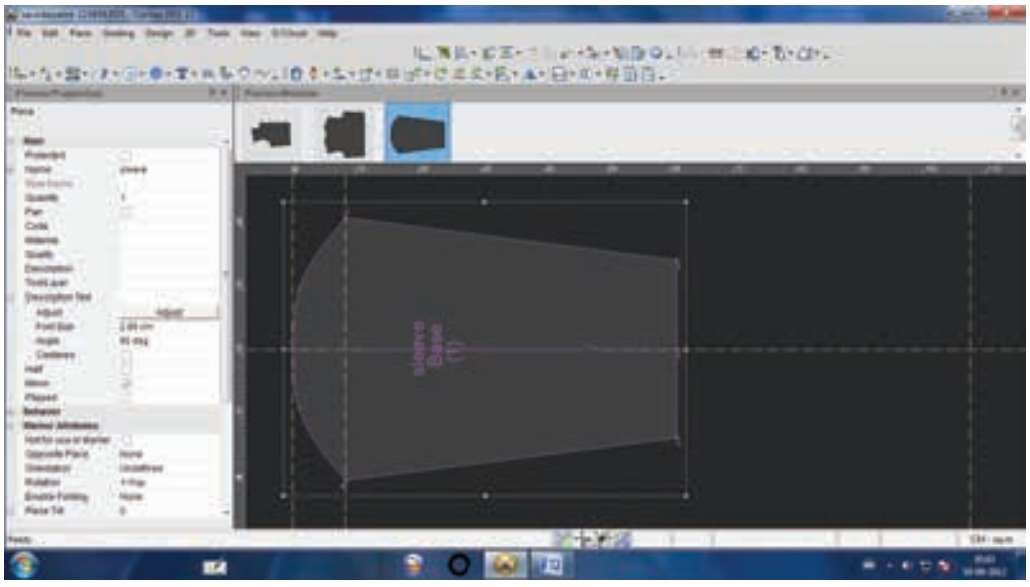
Step 34: Give back armhole shape using move tool (Ctrl + Shift + M)

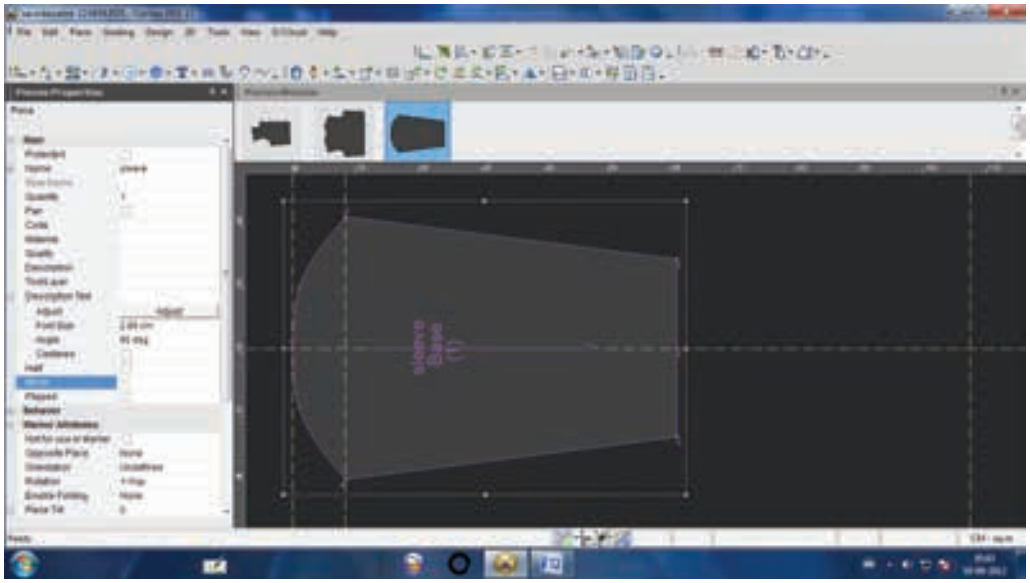


Step 35 : To open the sleeve fold line - select Set mirror line tool (ctrl + alt + H)

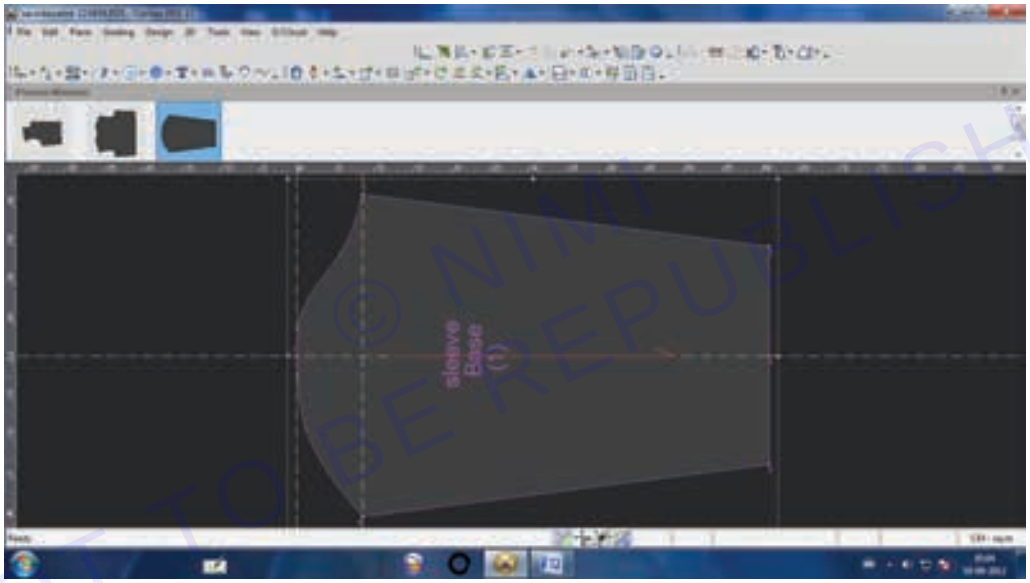


Step 36: Double click the pattern - Piece Information table arrears

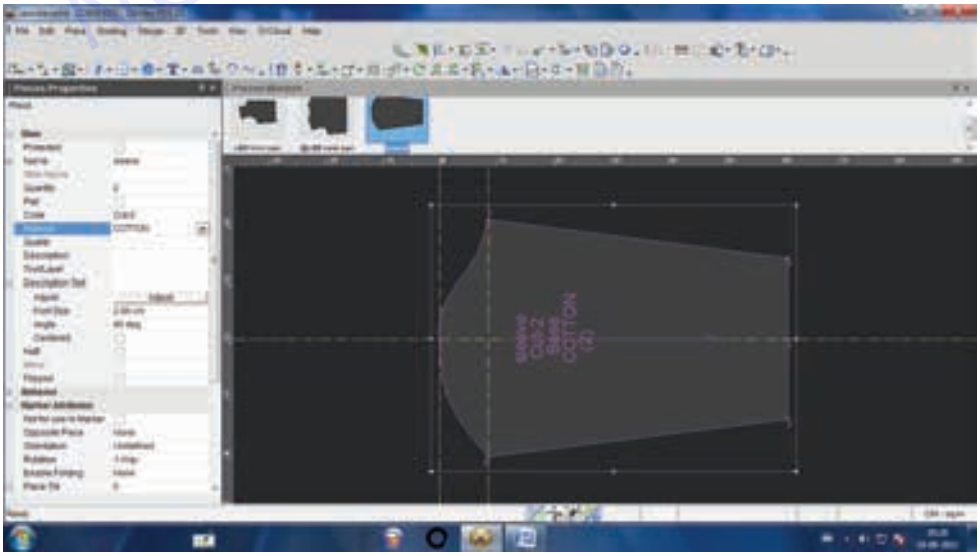




Step 37: Use Move tool to give front armhole shape.



Step 38: Give details in Piece Information Table – (Piece Name, Quantity, Code, Cut , Material)



Save the Pattern -(ctrl+S)

Note: Get the work checked by your Instructor

Draft Ladies Trousers

Objectives : At the end of this exercise you shall be able to

- draft Ladies' Trousers.

Requirements

Tools/materials

- Computer with Software for Pattern Making (Latest Version) - 1 No.

Procedure

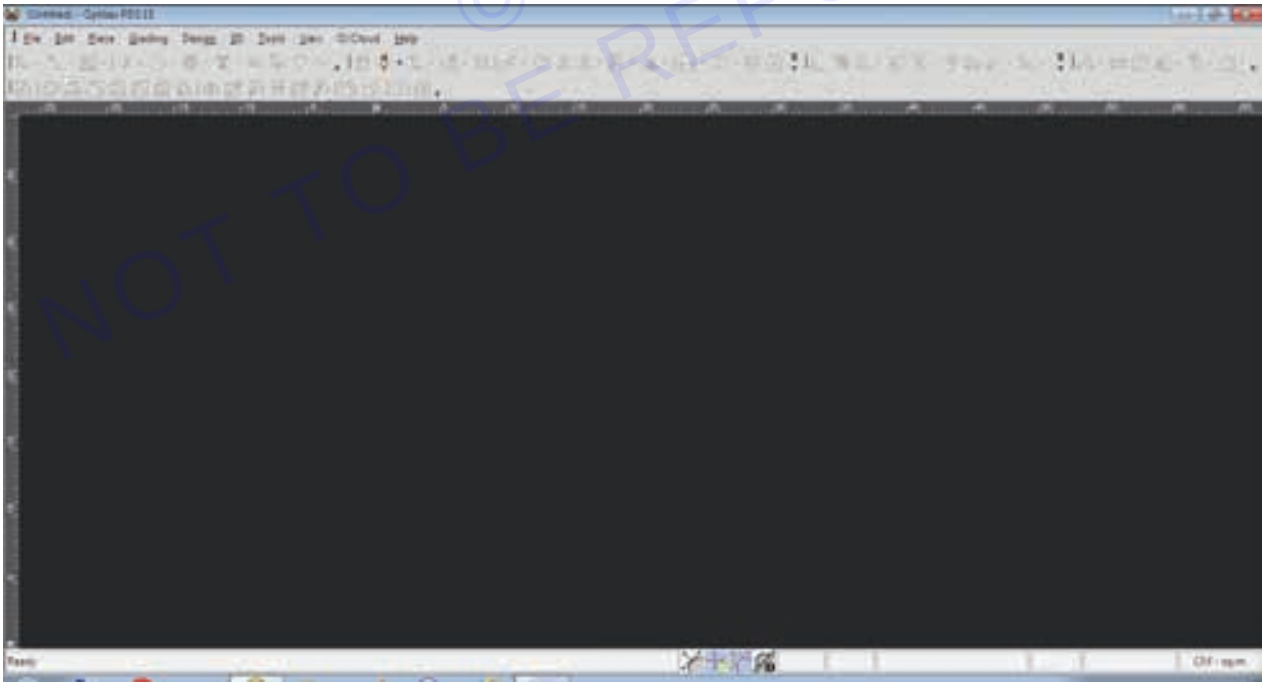
MEASUREMENT IN CM

Full Length	-	100 cm
Crotch	-	27 cm
Hip Level	-	22 cm
Waist	-	72 cm
Hip	-	100 cm
Knee	-	48 cm
Bottom Hem	-	48 cm

Double click and Open PDS Icon

Step 1: Go to File menu - Click New (short cut key ctrl + N)

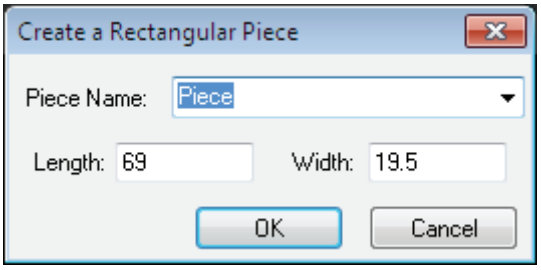
- New window opens

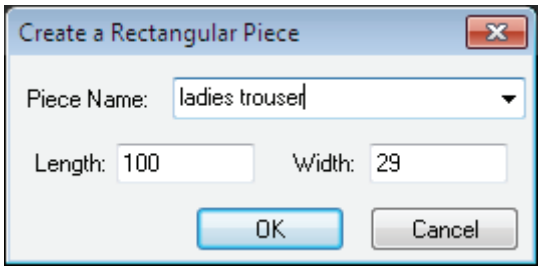


Right click the mouse - select create rectangular piece - dialogue box appears

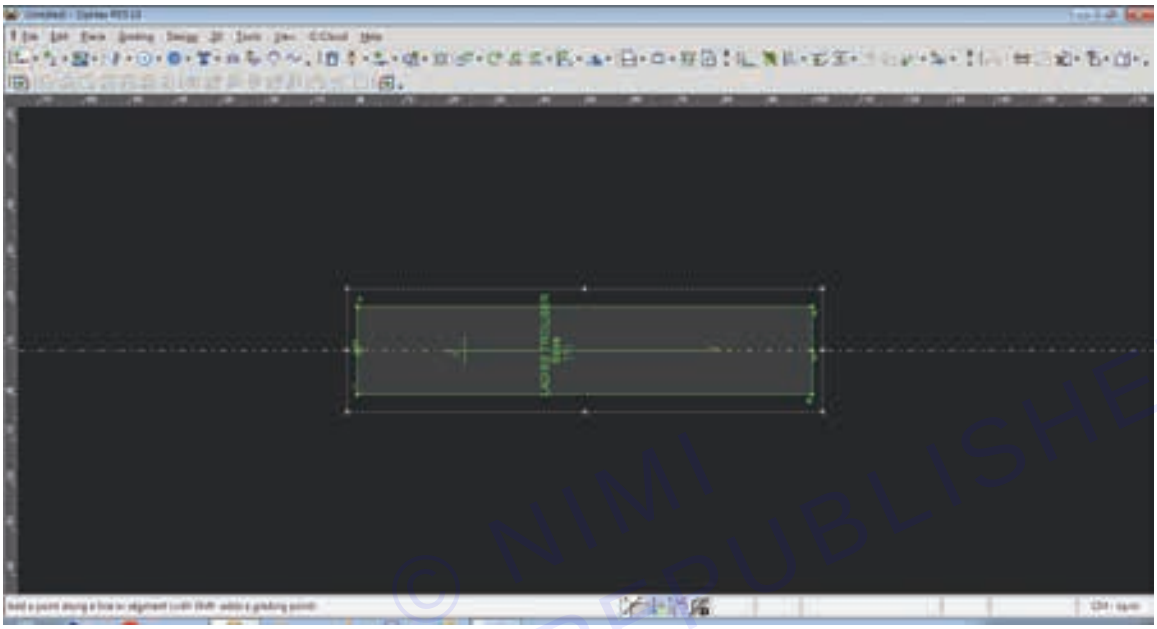
Step 2: Write piece name:- ladies trouser

Enter the required length:-100 and width:-29, Click Ok

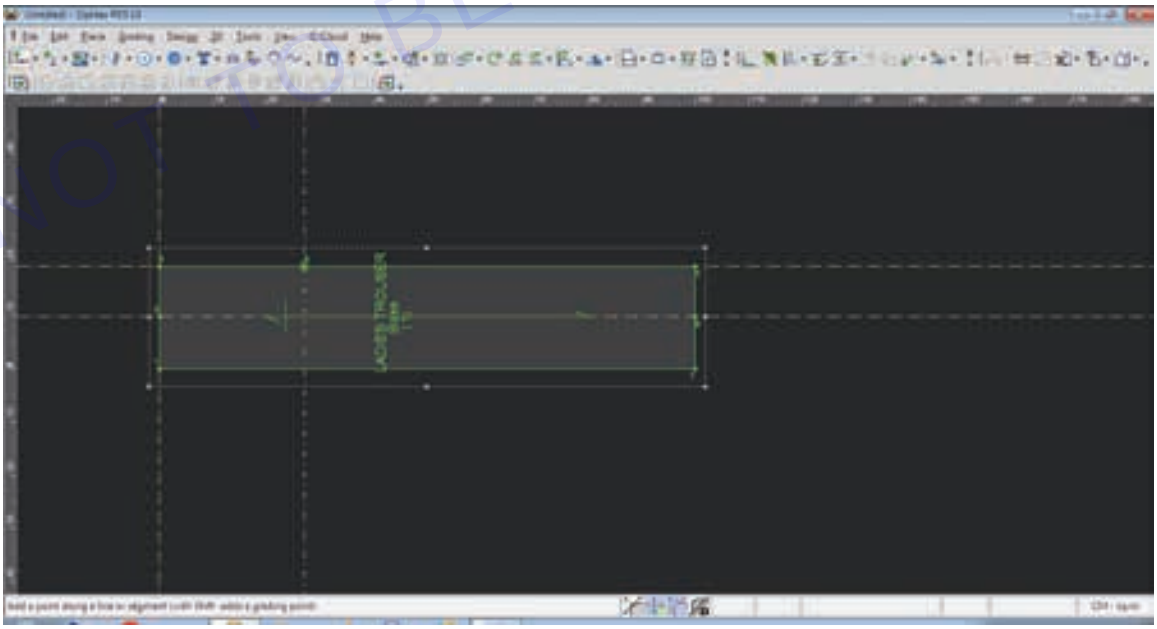




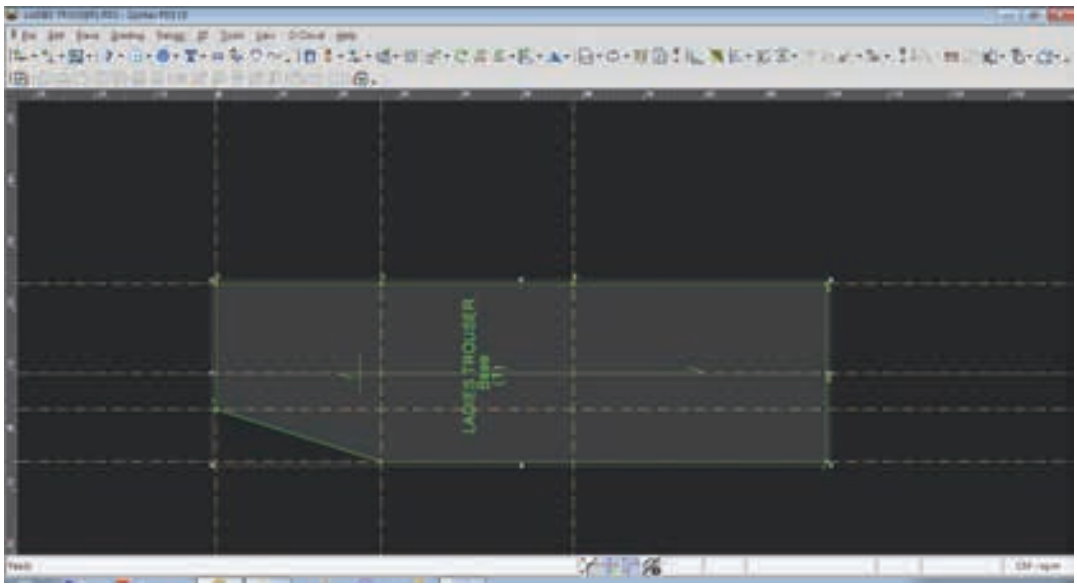
Step 3: Give grade point in center and keep guideline



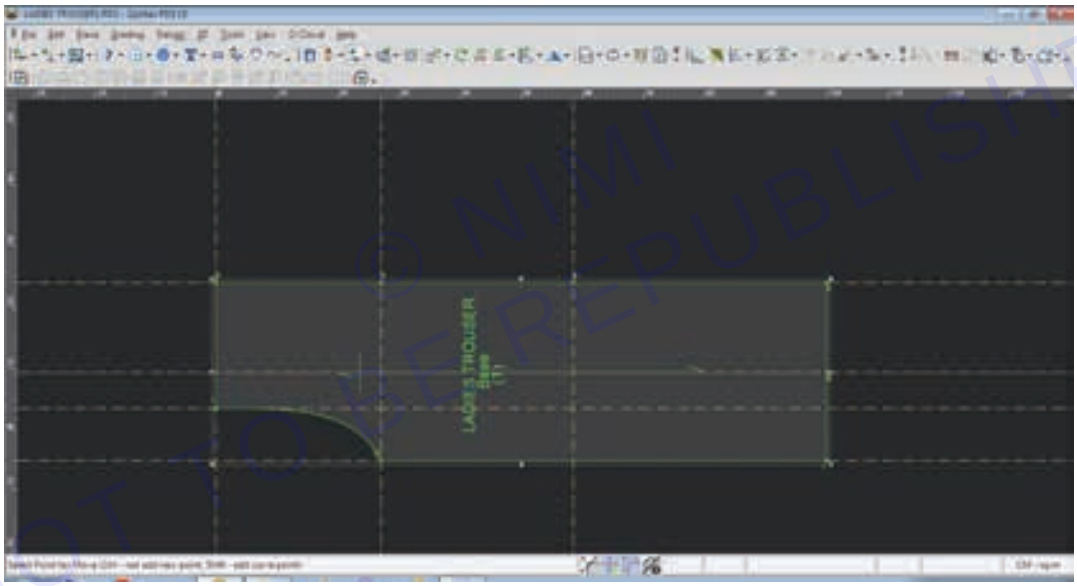
Step 4: Give all grade point (crotch length, knee length, etc)



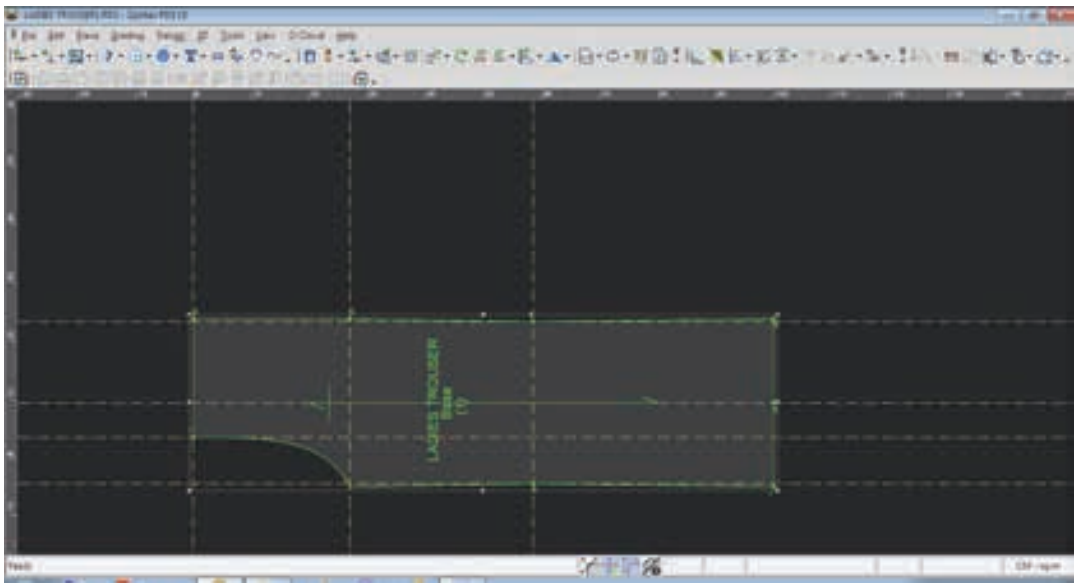
Step 5: Select guideline and keep for baseline, crotch line, knee line, crease line



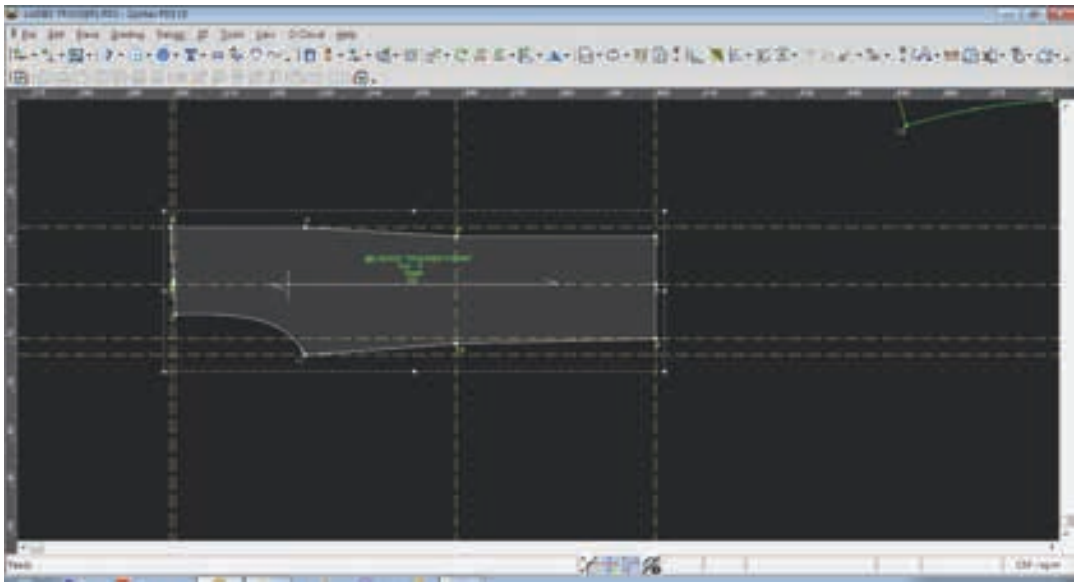
Step 6: Give crotch shape



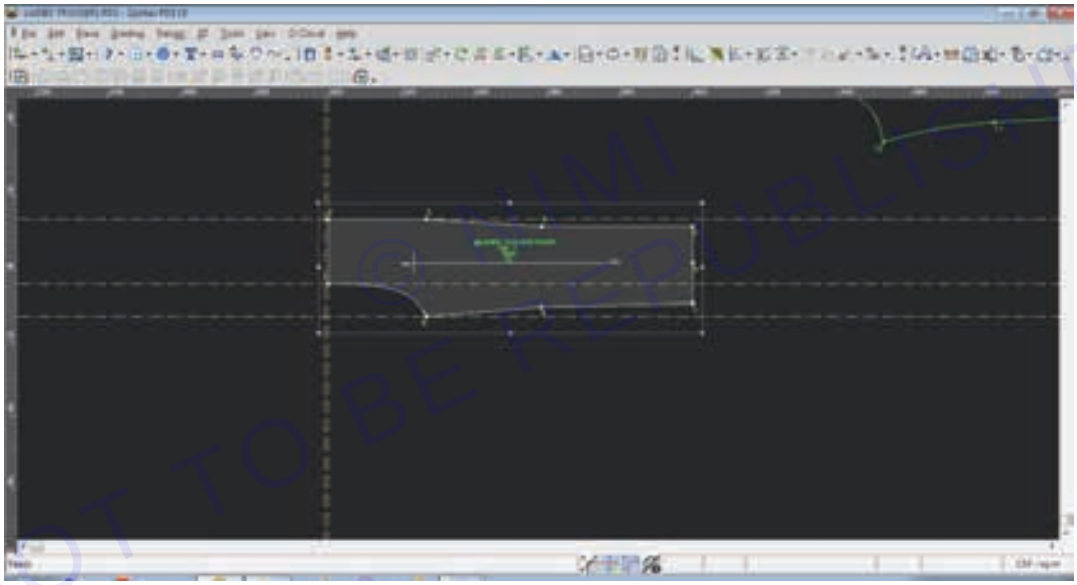
Step 7: Keep grade point for knee width and hem

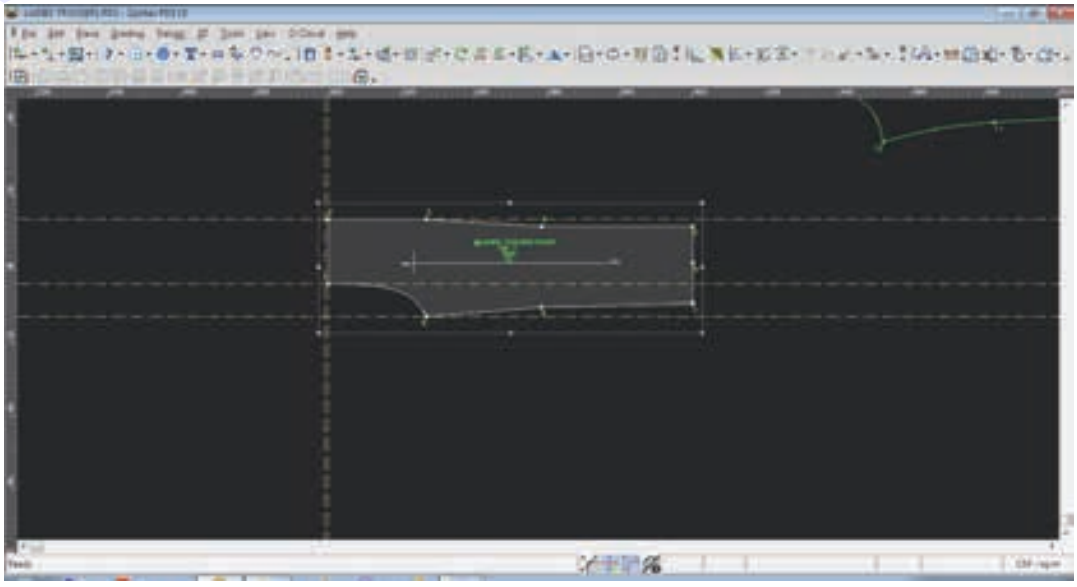


Step 8: Give shape Bottom hem & Knee shape. Delete extra points

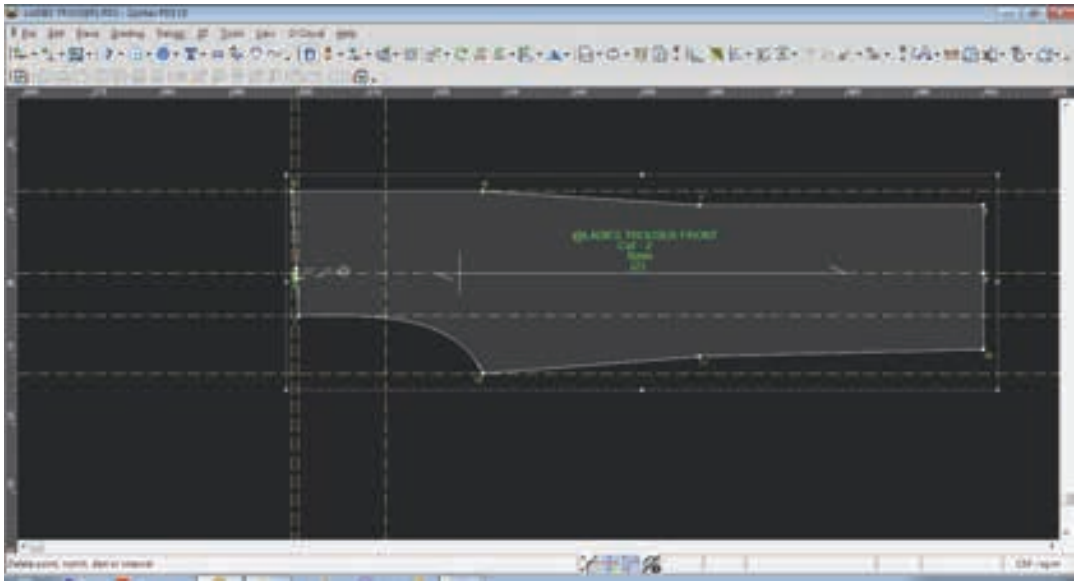


Step 9: Keep guideline for 1 cm and rise up the waist line

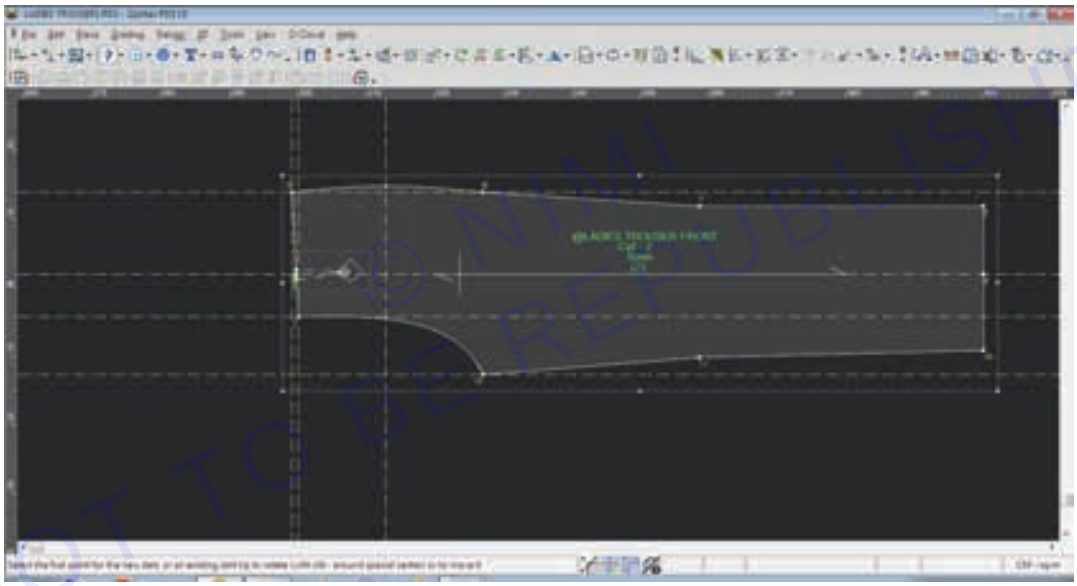




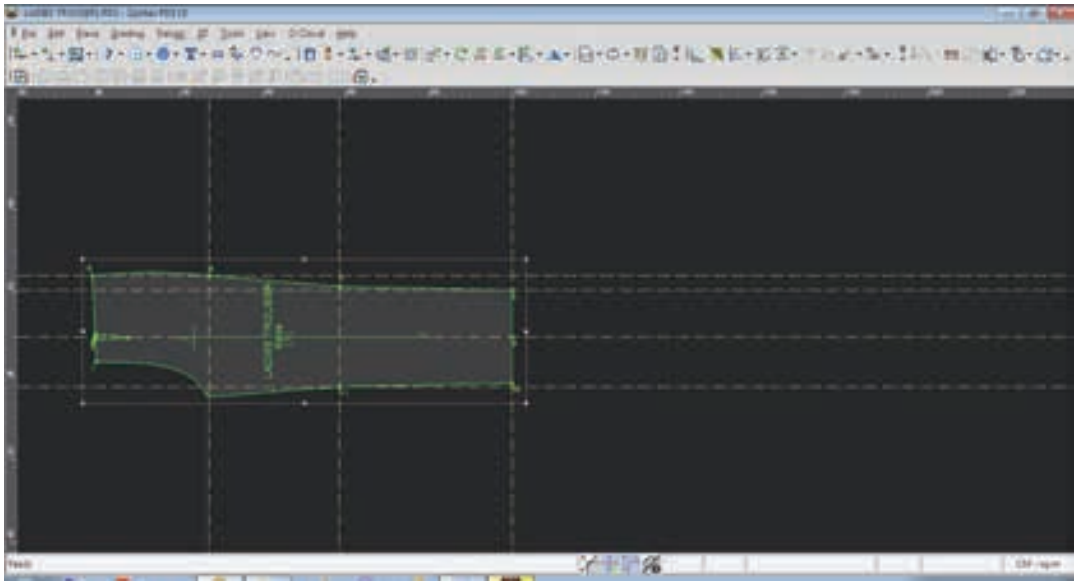
Step 10: Give dart in center point – (dart intake -1.5 cm, dart length - 8 cm)



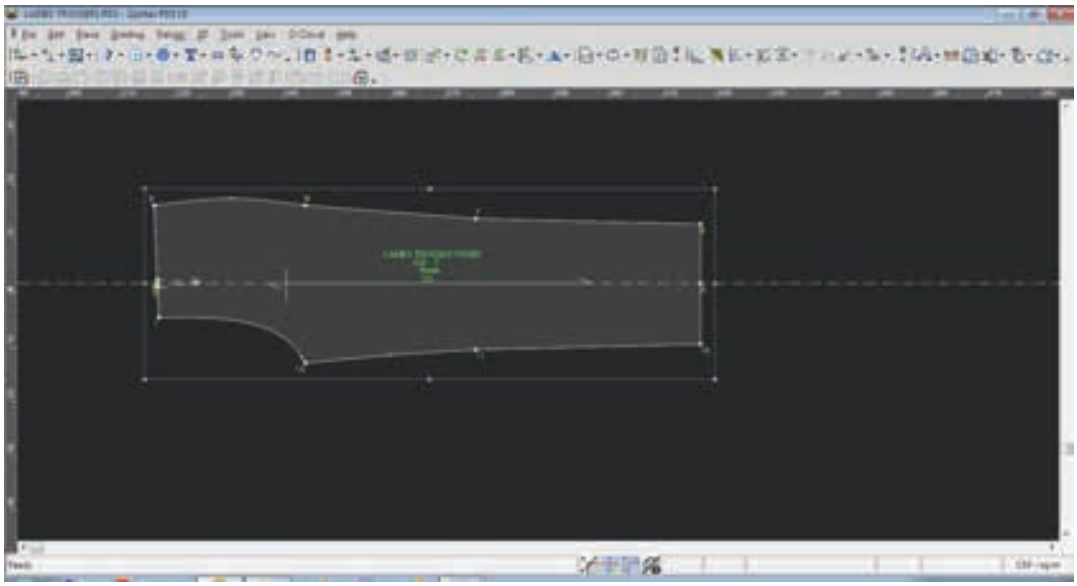
Step 11: Give Hip curve shape



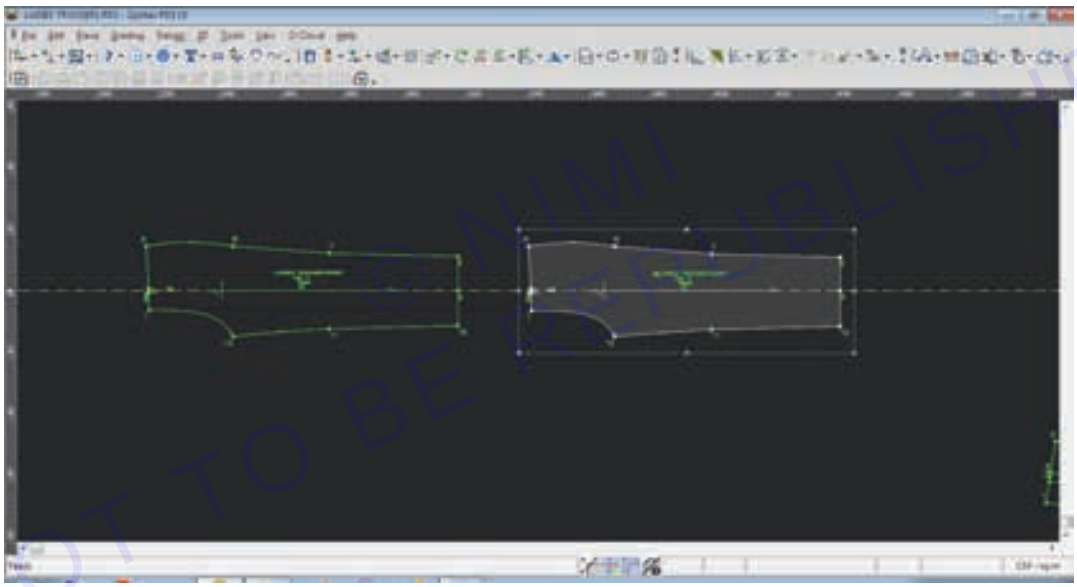
Step 12: Give Inner leg shape using move point tool



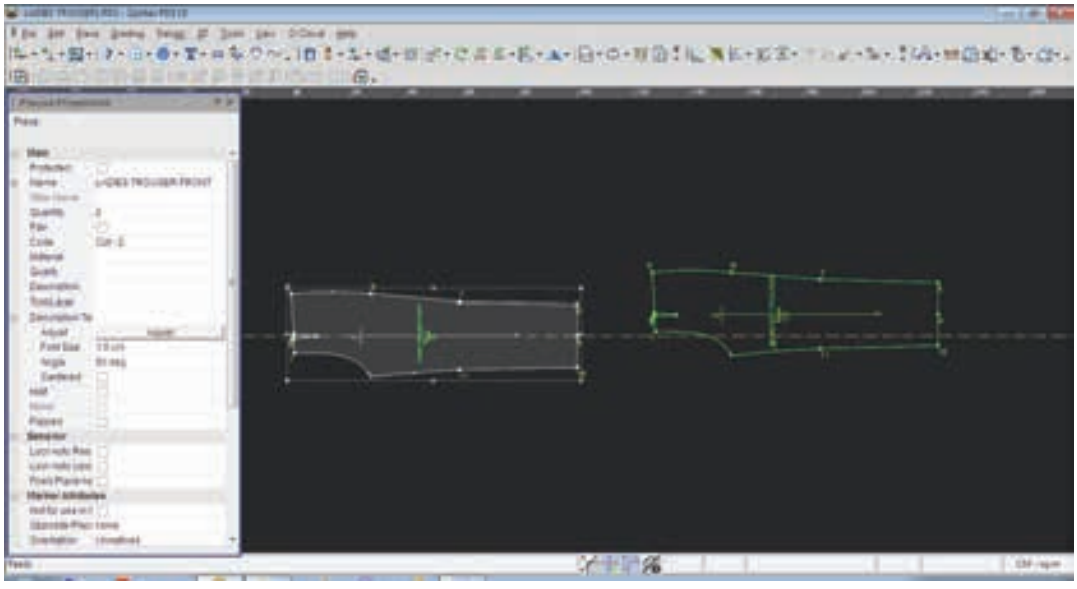
Step 13: Check all the measurement and shape of front part



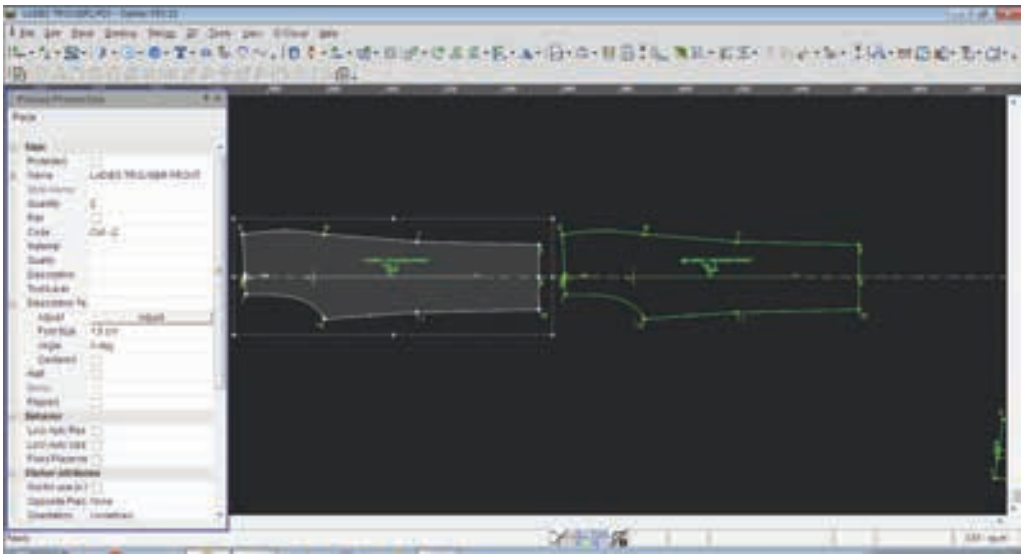
Step 14: Copy & Paste front part (ctrl + c , ctrl+v)



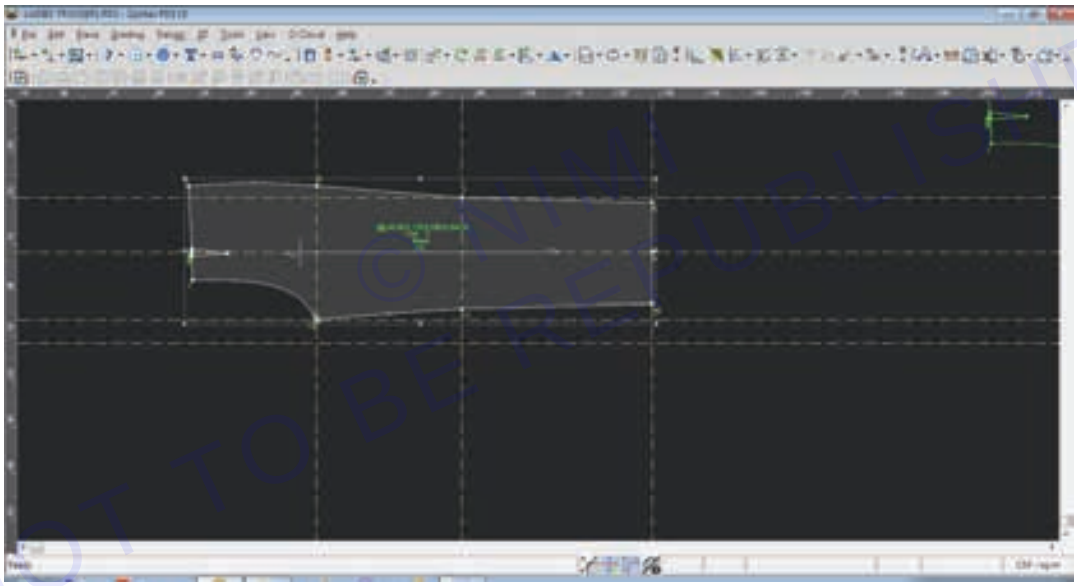
Step 15 : Select the Front part and give all piece information (piece name, cut quantity, code)



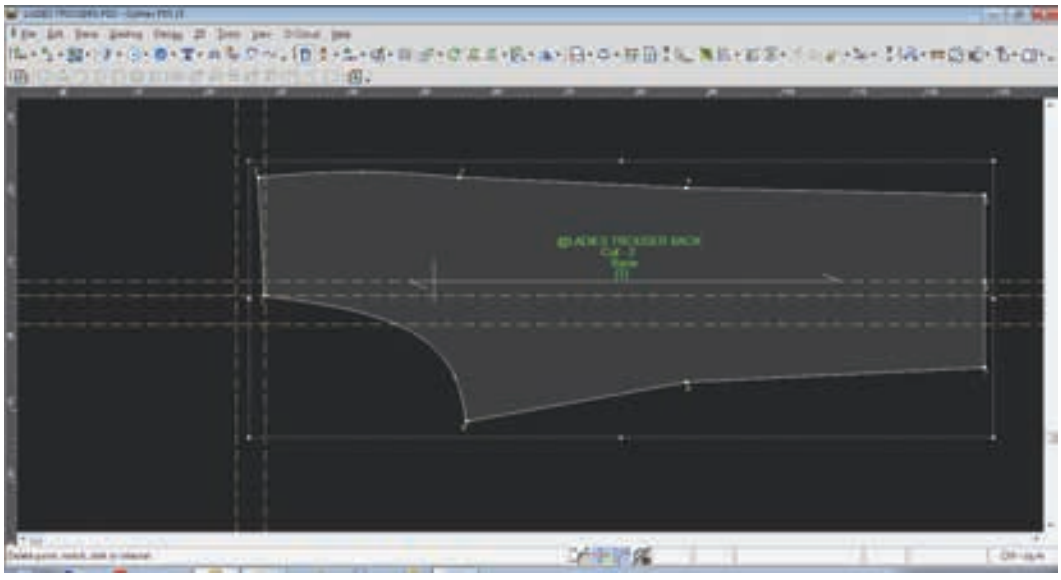
Step 16 : Select back part & give all piece information



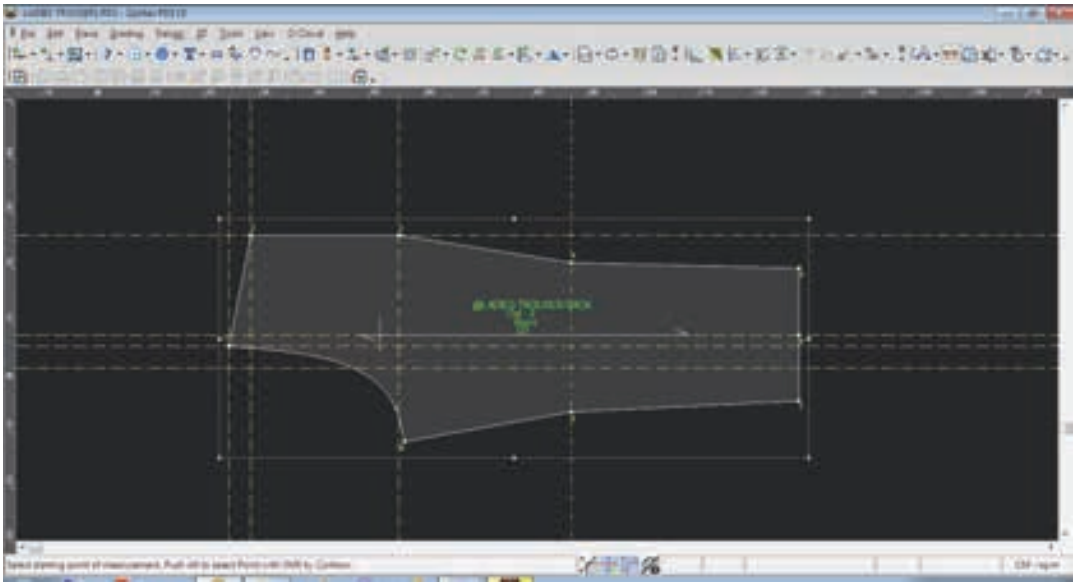
Step 17: Keep guide line to increase hip width 5 cm, Knee width 2 cm, Hem width 1 cm of back part. Using move point tool move the point as required.



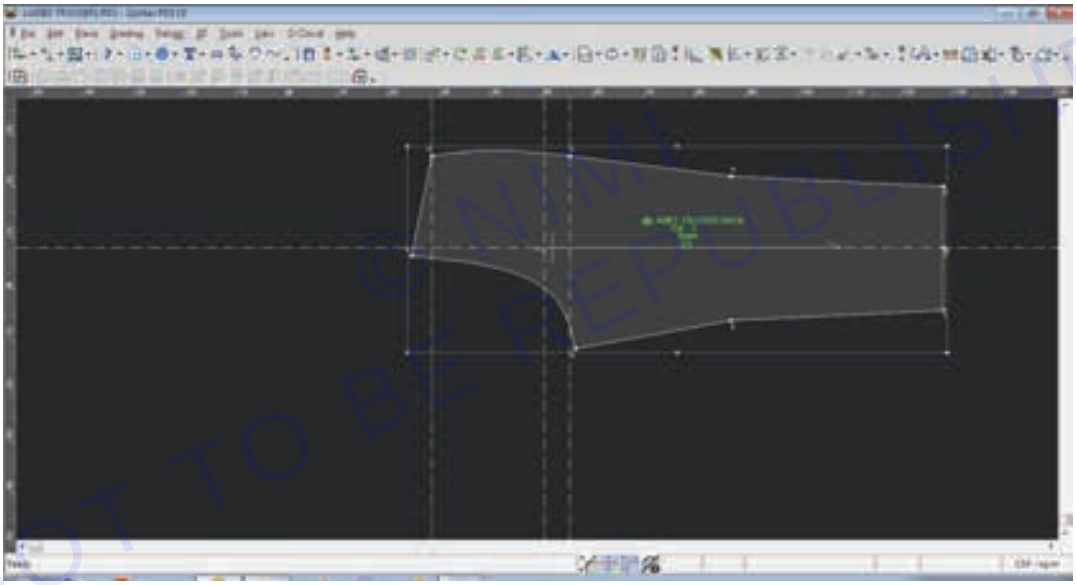
Step 18: Check for Knee width, Hem width and give crotch hip shape of back part,



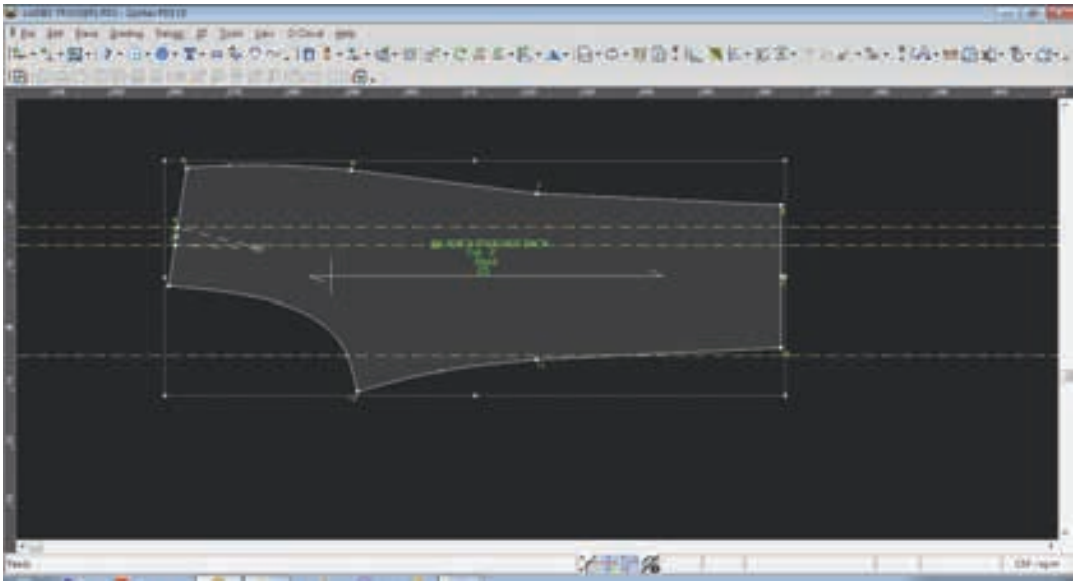
Step 19: Extend the waist line 4cm of back part



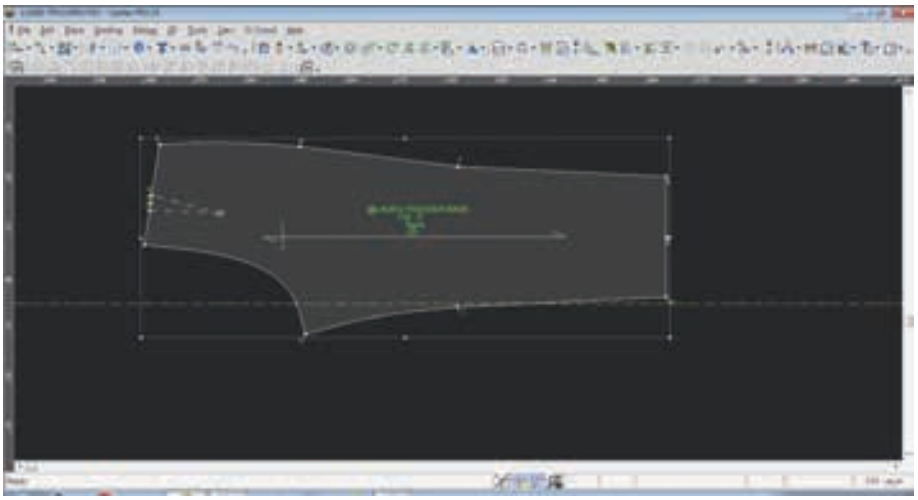
Step 20: Measure and give seat angle shape



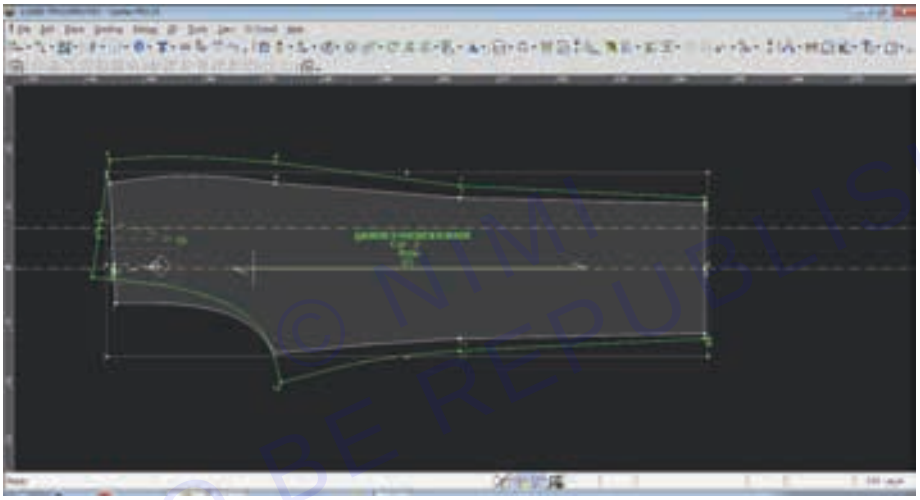
Step 21; Give Dart on back part (dart intake 3cm & dart length 15 cm)



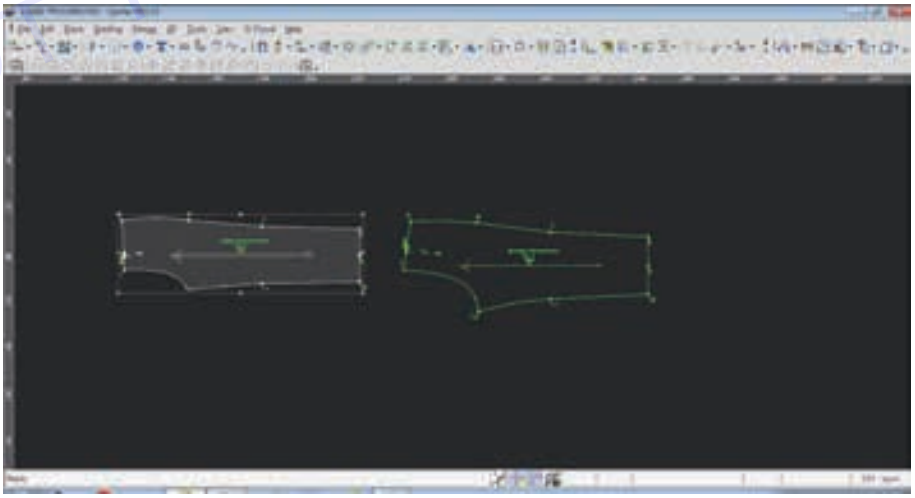
Step 22 : Give shape of Inner leg length side of back part



Step 23: Cross check the pattern by placing Front part over the Back part



Step 24: Separate both the front & back part



Step 25 : Save the file (ctrl +s)

Note: Get the work checked by your Instructor

Drape the Pattern on a Model

Objectives : At the end of this exercise, you shall be able to:

- drape the Pattern on a Model**.**

Requirements

Tools/Instruments

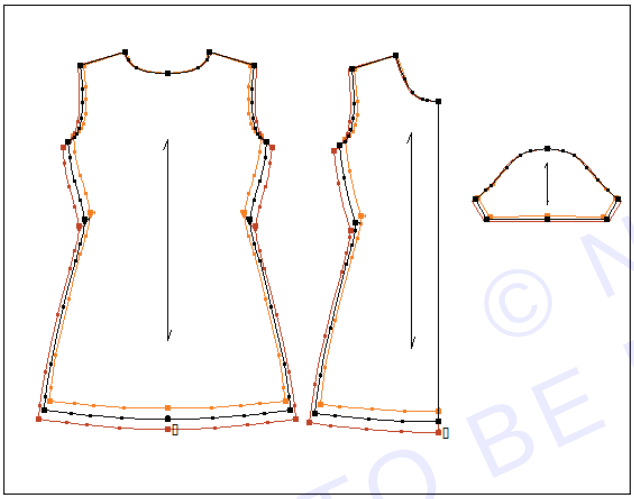
- Computer with Software for Pattern Making (latest version) - 1 No.

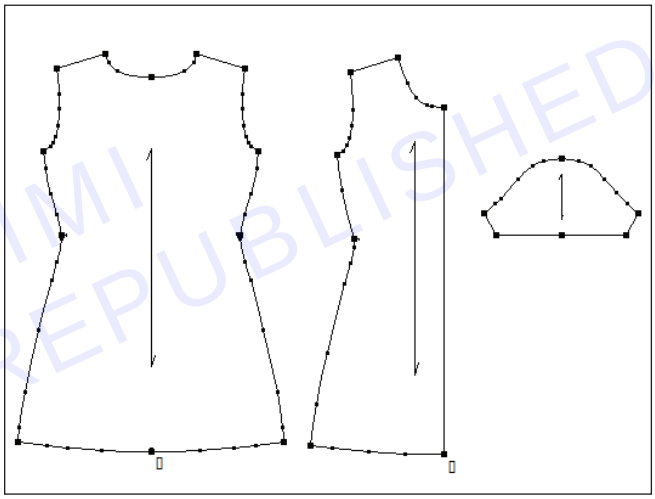
Procedure

1 Double click on the icon of the draping software.

2 Open the required pattern file. This file is a symmetric file and all the patterns have the quantity of two. Only half the amount of the actual pieces is needed.

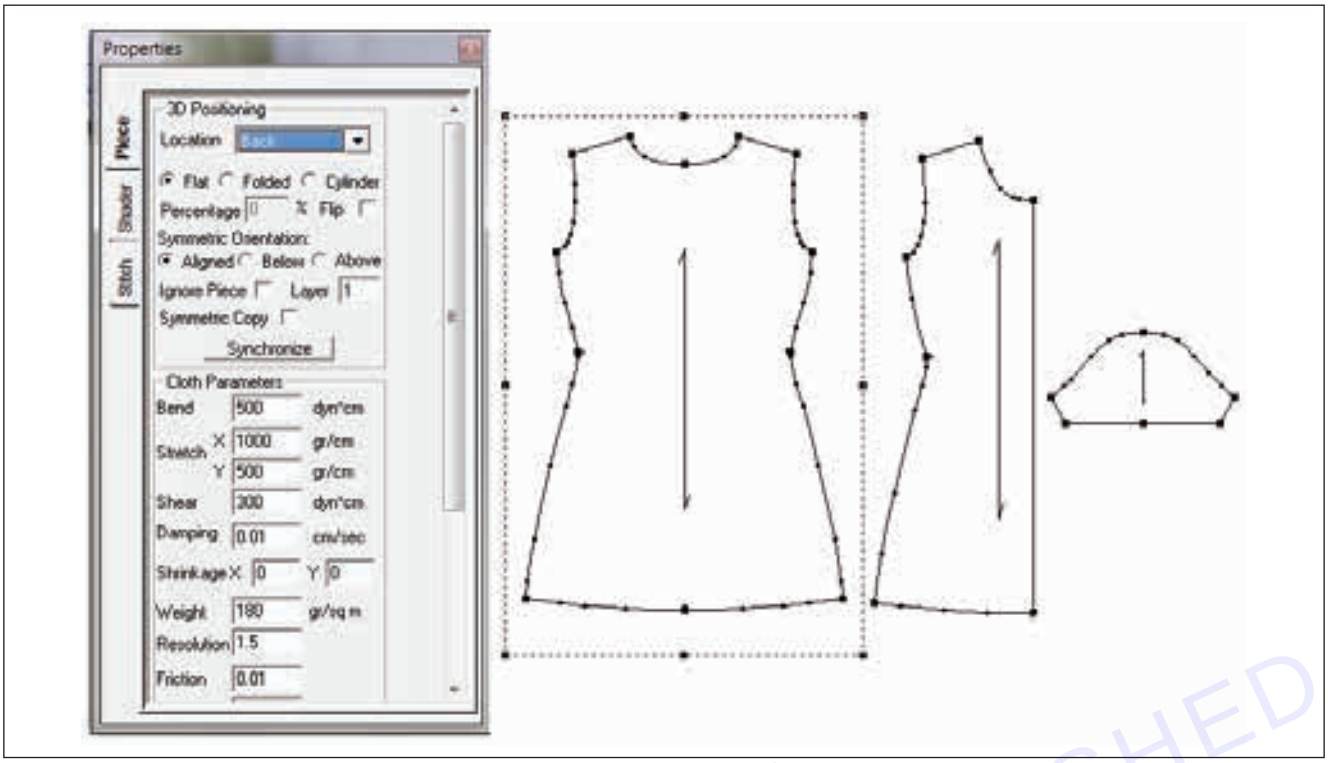
3 Go to Grading Menu. Select Zero Grading and Select Zero All Grading. Select 'All pieces in the file' in the Dialog box.





4 Make sure the style consists of all patterns necessary. If some are missing, we may copy and paste, then flip or rotate accordingly. The pieces are the right side pieces. Lay the patterns out in a sensible manner on the screen.

5 From the View menu select 3D and select "Properties" dialog that can be found in the 3D subfolder. Dock this window by default vertically on left side of the screen. For each and every piece select the appropriate initial body position. Click one on the piece to select. Pieces can be multiply selected using "Shift" key or by dragging a rectangle and assigned similar properties.



6. Verify placement by placing the cloth on the virtual model. Open the 3D view by selecting the “Model” options from the 3D subfolder in the VIEW menu.
7. Click on the “Place Cloth” tool. From the 3D toolbar.
8. After pressing the tool, you should see the following in 3D. Both front pieces are located on top of each other, and the same for the back. We now have to separate them interactively in 3D.

9 There are two basic operating modes in 3D: Navigate. (Default, always on) & Edit.(CTRL key down). Navigation mode is always “On”, meaning we can always rotate, zoom & move the mannequin to inspect from different angles, no changes will occur. Edit mode is available by holding down the Ctrl key.

10 To move a specific piece, hold Ctrl down, then left click the piece, it should show a green rectangle indicating its selection. Moving the mouse left, right up and down moves the piece accordingly. To push the piece IN and OUT hold Ctrl down, right click it, and then move the mouse Up and Down.

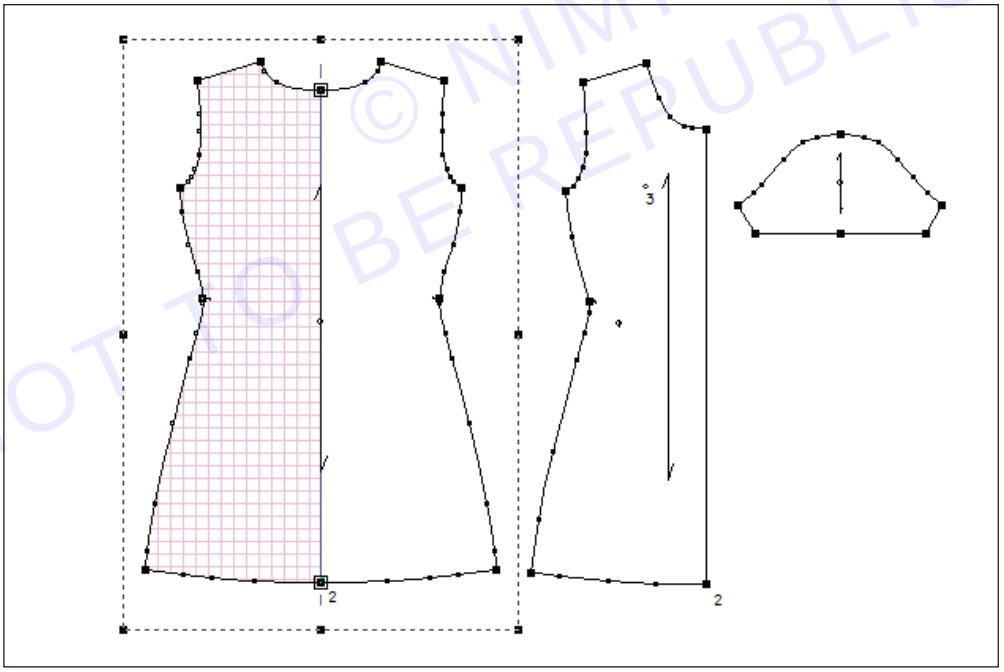
11 Make sure the pieces are located correctly by inspecting the mannequin from multiple angles.

12 Using clear cloth tool, remove the fabric from the model.

13 Select ‘Shader’ in the 3D properties dialog box. Select the colour and texture of the fabric.

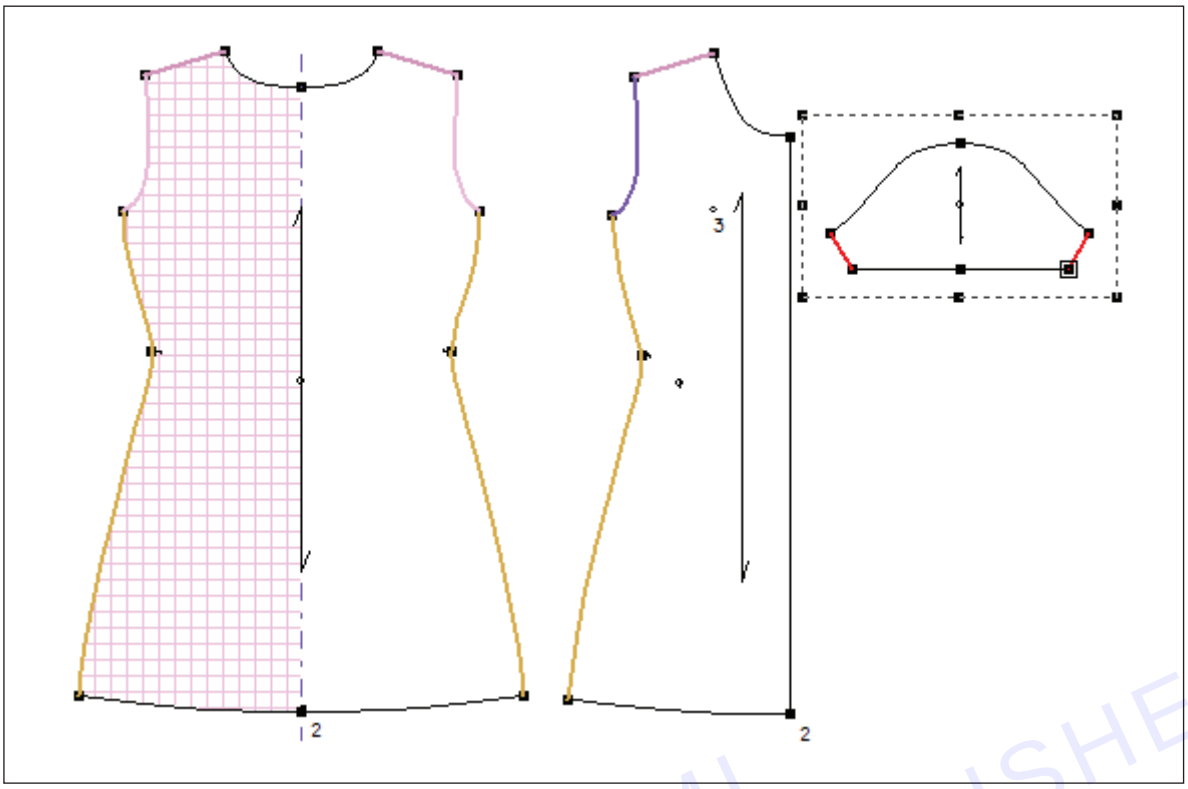
14 Use place cloth tool and verify the fabric colour and texture.

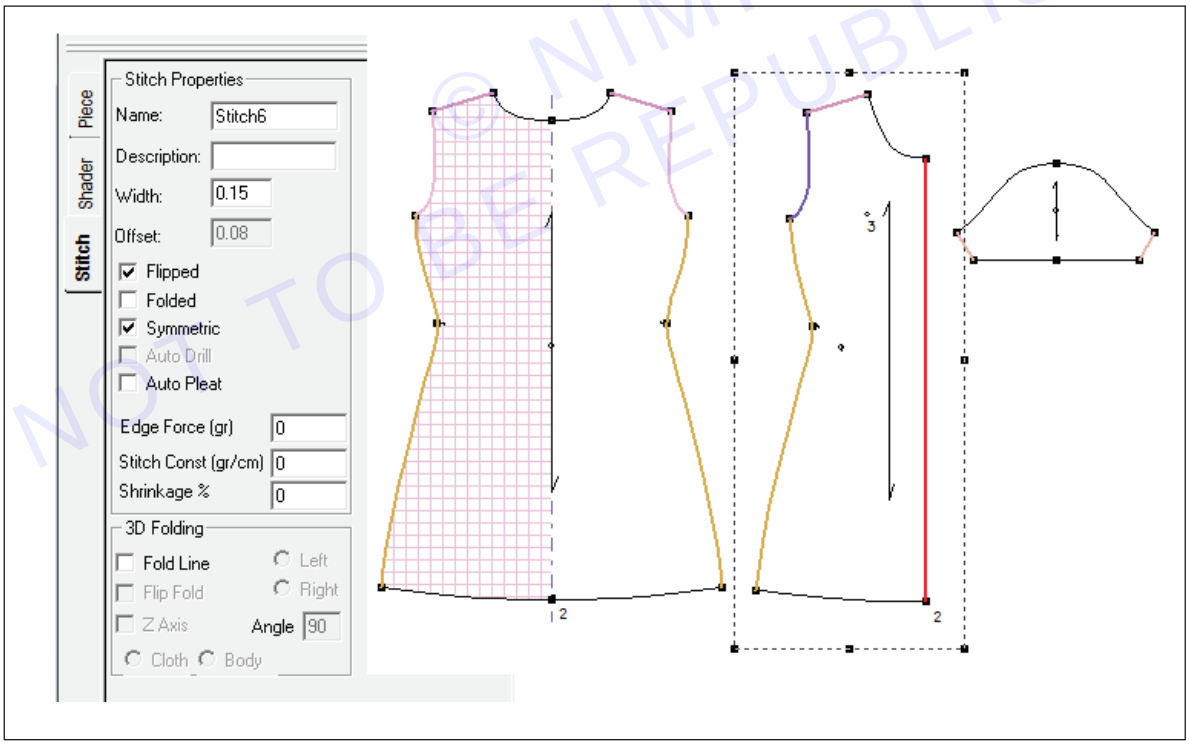
15 Remove the fabric using clear cloth tool. Select the Back pattern using selection tool. Select the left half of the pattern and click Set Half tool.



16 Select stitch tool in 3D tools. Select the front shoulder& Back shoulder, Front side seam & Back side seam, Front armhole & Sleeve front armhole, Back armhole & Sleeve back armhole and finally sleeve left side seam & Sleeve right side seam. All the selection should be in Clockwise order only. Notice the change in colour of the segments after selection.

17 Select the front CF line clockwise using stitch tool. Select Stitch menu in 3D Properties and mark Symmetric. Note that the flipped has also been marked automatically.





18 To delete a particular stitch, select the stitch tool and right click. The shape of the curse will be changed. Select a particular stitch and press del in key board.

19 Go to 3D tools, Click place cloth tool. The patterns are connected using blue coloured stitch lines over the model. Do the alterations if required.

20 Click Simulate Draping Tool. The patterns are joined and finally draped in the model.

Note : Get the work checked by your Instructor

MODULE 7 : Plan & Organize Survey Reports

EXERCISE 30 : Exercise on each topic, collection of samples, survey work in market & industry, preparation of sample folder & survey reports

Objectives

At the end of this exercise you shall be able to

- market research and survey planning
- sample collection and preparation.

Requirements

Tools/materials

- Computer with Software
- Laptop with windows

Job Sequence

Creating a collection of cloth samples, conducting surveys in the market and industry, and preparing reports can be a comprehensive project. Here's a structured approach to carry out these tasks:

1 Market research and survey planning

- **Define your objectives:** Determine the purpose of the survey. Are you trying to understand market trends, customer preferences, or industry demands?
- **Identify target demographics:** Decide who you want to survey. Are you targeting consumers, retailers, manufacturers, or designers?
- **Develop survey questions**: Create a set of questions that will help you gather relevant information. These questions should be clear, unbiased, and focused on your objectives.
- **Choose survey methods:** Decide whether you'll conduct online surveys, in-person interviews, phone surveys, or a combination of methods.

2 Sample collection and preparation

- **Source cloth samples:** Gather a variety of cloth samples from suppliers, manufacturers, or retailers. Ensure that your collection includes different types of fabrics, colors, textures, and patterns.
- **Organize samples:** Categorize the cloth samples based on their characteristics such as fabric type (cotton, silk, wool, etc.), color, pattern, and texture.
- **Prepare sample folders:** Create folders or binders to store the cloth samples neatly. Label each sample with relevant information such as fabric composition, supplier details, and price.
- **Create digital records:** Use CAD (Computer-Aided Design) software tools to create digital records of the cloth samples. This can help in cataloging and sharing the samples with stakeholders.

3 Conducting surveys

- **Distribute surveys:** Implement your chosen survey methods to reach your target audience. Ensure that the surveys are distributed effectively to maximize responses.
- **Collect responses:** Gather responses from survey participants. Monitor response rates and follow up with reminders if necessary.

- **Analyze data:** Use statistical tools or software to analyze the survey data. Look for patterns, trends, and insights that can inform your decisions.

4 Preparation of reports

- **Compile survey findings:** Summarize the key findings from your survey data. Present the information in a clear and organized manner.
- **Create visual aids:** Use charts, graphs, and tables to visualize survey results. This can make the data easier to understand and interpret.
- **Write the report:** Draft a comprehensive report that includes an introduction, methodology, findings, analysis, and recommendations.
- **Review and finalize:** Review the report for accuracy, coherence, and completeness. Make any necessary revisions before finalizing the document.

5 Presentation and dissemination

- **Present findings:** Share your survey findings and sample collection with relevant stakeholders such as clients, colleagues, or decision-makers.
- **Distribute reports:** Circulate the final survey reports to stakeholders via email, presentations, or printed copies.
- **Gather feedback:** Encourage feedback from stakeholders to understand their perspectives and address any concerns or questions.

By following these steps, you can effectively conduct surveys, create a collection of cloth samples, and prepare comprehensive reports for market and industry analysis.

MODULE 8 : Prepare & Evaluate the Quality Control

EXERCISE 31 : Identifying defects in fabrics & accessories

Objectives

At the end of this exercise you shall be able to

- weaving defects
- printing and dyeing defects.

Requirements

Tools/Materials

- Fabric testers, measuring tape
- Seam gauges, thread samples

Job Sequence

Fabric defects

1 Weaving defects

- **Broken ends or picks :** Look for areas where warp or weft yarns are missing, creating weak spots in the fabric.
- **Floats or snags :** Check for loose yarns on the surface of the fabric, caused by weaving errors or machine malfunctions.
- **Misaligned or skewed patterns :** Examine the fabric for patterns that are not aligned properly, leading to irregularities in the design.

2. Knitting defects

- **Dropped stitches :** Inspect the fabric for holes or gaps caused by missed or dropped stitches during the knitting process.
- **Runners :** Look for long, pulled yarns caused by knitting machine malfunctions, which weaken the fabric's integrity.
- **Fabric distortion :** Check for uneven tension or misalignment of stitches, leading to distortions in the fabric structure.

3 Printing and dyeing defects

- **Off-Registration :** Examine printed fabrics for misalignment of colors or patterns.
- **Staining or bleeding :** Check for colors bleeding into each other or onto adjacent areas due to improper dye fixation.
- **Inconsistent color:** Look for variations in color intensity or hue across the fabric surface.

4 Finishing defects

- **Creases or wrinkles :** Inspect the fabric for uneven or excessive creasing caused by improper finishing processes.
- **Stiffness or harshness :** Feel the fabric for roughness or stiffness due to excessive chemical treatments or insufficient softening.

Accessory defects

1 Zippers

- **Stuck or jammed zippers :** Test zippers to ensure they open and close smoothly without sticking or jamming.
- **Missing teeth :** Check for gaps in the zipper chain where teeth are missing, affecting functionality.
- **Zipper Pull Malfunctions :** Inspect the slider or pull-tab for any issues that may hinder smooth operation.

2 Buttons

- **Missing buttons :** Look for areas where buttons are not attached or have fallen off during handling or washing.
- **Mismatched buttons:** Check buttons to ensure they match the fabric or other buttons on the garment.
- **Loose Threads:** Inspect button attachments for excess threads, indicating poor sewing quality.

3 Elastic

- **Weak elasticity :** Stretch elastic gently to ensure it retains its elasticity without stretching excessively or losing its shape.
- **Exposed rubber:** Check elastic for any signs of the rubber core becoming exposed due to fabric deterioration or poor stitching.

4 Labels and tags

- **Faded printing : Examine labels or tags for faded or illegible printing, making care instructions or brand** information difficult to read.
- **Incorrect information:** Check labels for accurate size, composition, and care instructions to avoid customer confusion or dissatisfaction.
- **Poor attachment :** Inspect labels or tags to ensure they are securely attached to the product, preventing detachment during use or washing.

Regular inspection and quality control measures are essential for detecting and addressing defects in fabrics and accessories, ensuring that only high-quality products reach the market.

EXERCISE 32 : Cost Sheet

Objective

At the end of this exercise you shall be able to

- know about cost sheet
- importance of cost sheet
- analyse samples of cost sheet
- prepare cost sheet.

A cost sheet for fashion design is a comprehensive document that outlines all the expenses associated with creating and producing a garment. It includes material costs, labor costs, overheads, and other miscellaneous expenses. This helps designers make informed decisions about pricing strategies and profitability.

A cost sheet depicts the following facts:

1 Total cost and cost per unit for a product.

2 The various elements of cost such as prime cost, factory cost, production cost, cost of goods sold, total cost, etc.

3 Percentage of every expenditure to the total cost.

4 Compare the cost of any two periods and ascertain the inefficiencies if any.

5 Information to management for cost control

6 Calculate and summarize the total cost of the product.

Importance and objectives of cost sheet

1 For calculating the total cost break-up

A cost sheet shows the break-up of the total cost into different elements, i.e. material, labour, overheads, etc. It also depicts the total cost and cost per unit of the units produced.

2 For determining the selling price

A cost sheet helps in determining the selling price of a product or of a service. The cost sheet ascertains cost at each stage of the product and also the total cost of the product, where a margin of profit is added and thus the selling price is ascertained.

3 It facilitates comparison

It helps in comparing the costs of the product over a period of time. This helps the organisation to investigate the reasons for increasing costs and also control them on the basis of them.

4 Facilitating managerial decision making

Preparation of cost sheet helps managers at various levels in their decision-making process such as

1 to produce or buy a component,

2 what price of goods to quote in the tender,

3 whether to retain or replace an existing machine,

4 how to reduce costs and maximize profit.

5 identify and make decisions whether they need to continue with the product or not.

5 Preparation of budgets

Organizations can prepare a budget with the help of a cost sheet. We can prepare the budget by using the current or previous year's data.

Based on our existing cost sheet, we can make estimates of our costs for the next financial year. It helps to prepare and make the necessary arrangement of funds for costs of the next financial year.

Elements of cost

Prime cost: It comprises direct material, direct wages, and direct expenses. Alternatively, the Prime cost is the cost of material consumed, productive wages, and direct expenses.

Factory cost: Factory cost or works cost or manufacturing cost or production cost includes in addition to the prime cost, the cost of indirect material, indirect labour, and indirect expenses. It also includes the amount or units of WIP or incomplete units at the end of the period.

Cost of production: When Office and administration cost at the end of the period are added to the Factory cost, we arrive at the cost of production or cost of goods sold. Here, we make an adjustment for opening and Closing finished goods.

Total cost: Total cost or alternatively cost of sales is the cost of production plus selling and distribution overheads.

Sample - 1

Cost sheet for a frock

Sl.No.		Qnty Req.	Unit Price	Amount in Rs	
1	Materials				
	Cotton	1.8 mts	140/p.m	252.00	
	Interfacing	0.5 mts	50/p.m	25.00	
2	Trimming				
	Zipper	1 No.	20	20.00	
	Labels, Hang tages,			5.00	
	Size tickets,Poly bags			10.00	
	Cost of Materials			312.00	
3	Labour				
	Cutting			40.00	
	Sewing			100.00	
	Production Cost			140.00	
4	Total Cost (Cost of material + Production cost)			452.00.	
5	Profit & Tax 60%			271.00	
6	Sale Price			723.00	
	Rounded Off			**725.00**	

Sample - 2

Cost sheet for boys t-shirt

COST SHEET					
BUYER				DATE	
STYLE				DELIVERY	FOB
DESCRIPTION	BOYS T SHIRT			QUANTITY	4000
FABRICATION	100%Cotton single jersey,180 GSM				
SIZE	S,M,L,XL,2XL				
FACTORY					
YARN	100% Cotton 30/1(carded)				
GSM	180				
		ITEM	CONSUMPTION	UNIT PRICE	PRICE
100%Cotton single jersey,180 GSM		YARN	4.0	Rs.180	Rs.720
		KNITTING	4.0	Rs.165	Rs.660
		DYEING	4.0	Rs.235	Rs.940
100%Cotton 1 X 1 rib,200GSM			1.6	Rs.370	Rs.592
TOTAL (fabric in dozen)					Rs.2912
	MAIN LABEL		12	Rs.1	Rs.12
	CARE LABEL		12	Rs.0.50	Rs.6
ACCESSORIES, TRIMS, PACKAGING, EMBELISHMENT	SEWING THREAD		12	Rs.10	Rs.120
	DRAWSTRING				
	EYELET				
	ELASTIC				
	TWILL TAPE		12	Rs.1.25	Rs.15
	PRINT		12	Rs.30	Rs.360
	EMBROIDERY				
	WASHING		12	Rs.60	Rs.720
	BUTTON				
	ZIPPER				
	HANGER		12	Rs.40	Rs.480
	HAND TAG		12	Rs.2	Rs.24
	POLY		12	Rs.10	Rs.120
	CARTON		1	Rs.20	Rs.20
	OTHER			Rs.10	Rs.120
TOTAL ACCESSORIES COST IN DOZEN					Rs.1897
LAB TEST					Rs.1000
GARMENTS COST IN DOZEN(fabric+accessories+lab test)					Rs.5809
CM per dozen including profit 20%					Rs.2160
COMMERCIAL COST 3%					Rs.206
BUYING HOUSE COMMISSION 5%					Rs.300
TOTAL PRICE PER DOZEN					Rs.8475
PER PIECE FOB PRICE					Rs.2000

Sample - 3

Cost sheet for kids trouser (in dollars)

Costing Sheet of Kids Trouser						
FABRICS DETAILS: 73% cotton, 25% poly, 2% elasthan denim 7.5 oZ (YR-1923/3)						
Sl No.	Particulars	COST SHEET FOR PER PCS+DZN				
		YY/YDS	PRICE/YDS	COST/PCS	COST IN DZN	
1	Self Fabric	1.2	$1.85	$2.22	$26.64	
	Total Fabrics Cost-			**$2.22**	**$26.64**	
	Basic Trims					
2	Pocketing	0.15	$0.70	$0.11	$1.26	
3	Interlining			$0.03	$0.36	
4	Metal Zipper			$0.12	$1.44	
5	Plastic Button			$0.02	$0.24	
6	Metal button			$0.04	$0.48	
7	Metal Rivet			$0.05	$0.60	
8	Thread			$0.08	$0.96	
9	Hole elastic			$0.06	$0.72	
10	String with plastic tipping				$ -	
11	Special label EF, Yigga girls+SIZE WOVEN			$0.03	$0.36	
12	WASH CARE LABEL (LEFT SS INSIDE)			$0.03	$0.36	
13	WASH CARE LABEL (UNDER WCL1)			$0.03	$0.36	
14	HANG TAG EF, Yigga girls			$0.04	$0.48	
15	PRICE STICKER			$0.01	$0.12	
16	Waist tag (double)			$0.08	$0.96	
17	EMBROIDERY			$0.10	$1.20	
18	String			$0.03	$0.36	
19	Poly			$0.08	$0.96	
20	Carton			$0.07	$0.84	
21	Carto STKR,Tagpin,Gumtape			$0.06	$0.72	
	Total-			**$1.07**	**$12.78**	
	Embroidery/Print				$ -	
	Total-			$ -	$ -	
	Wash	TOWEL BEACH WITH/PP		$0.75	$9.00	
	Total-			**$0.75**	**$9.00**	
	ALL FABRICS+TRIMS COST			**$4.04**		
	Commercial Cost			$0.08	$0.97	
	CM			**$1.35**	$16.20	
	Total-			**$1.35**	**$16.20**	
	EXTRA-			**$0.03**		
	FINAL FOB:			**$5.50**	**$65.90**	

Prepare & Design cost sheet

Analyse the historical cost and estimated cost

1 Historical sheet is prepared on basis of actual cost

2 Estimated cost sheet is prepare on the basic of estimated cost.

Analyse the components of total cost

1 Prime cost (Prime cost= Direct material + Direct wages = Direct expenses)

Calculate prime cost from the following particulars for a production unit

Cost of material purchased	31,000
Opening stock of material	5,000
Closing stock of material	4,000
Wages paid	3,000
Rent of line of a special machine for production	6,000

Statement of prime cost

Material consumed		
Opening stock of material	5,000	
Material purchased	31,000	
Material available for consumption	36,000	
Closing stock of material	4,000	
Material consumed		32,000
Cost labour : wages		3,000
Cost expenses : Rent of hire a special machine		6,000
		41,000

Analyse the types of accessories

Sl.No.	No accessories
1	Inside collar card
2	Back support
3	Plastic butterfly
4	Tissue paper
5	Poly bags
6	Hang tag
7	Plastic bullets
8	Collar film
9	Pins
10	Clips
11	Hanger
12	Size Rings
13	Gum tapes
13	Carton Box

Analyse the actual cost of accessories

Sl.No.	Accessories	Actual cost
1		
2		
3		
4		
5		
6		
7		
8		
9		

Analyse the estimated cost of accessories

Packing accessories cost

Sl.No.	Description	Quality	Quantity	Approximate Range Price
1	Inside collar card	1" x 20"	One	20 Paise each
2				
3				
4				
5				
6				
7				
8				
9				

Measure & check as per spec. sheet

To prepare and evaluate a cost sheet and ensure it meets specifications, follow these steps

1 Gather Information

- Obtain all relevant data such as raw material costs, labor costs, overhead costs, and any other expenses associated with production.
- Gather information on the specifications provided for the cost sheet.

2 Format the Cost Sheet

- Create a spreadsheet or use accounting software to format the cost sheet.
- Organize the cost sheet with categories such as:
- Raw materials
- Direct labor
- Overhead costs
- Total cost per unit
- Selling price per unit (if applicable)
- Profit margin (if applicable)

3 Calculate Costs

- Calculate the cost of raw materials per unit based on the quantity required for production and their respective prices.
- Determine direct labor costs per unit based on the number of labor hours required and the wage rate.
- Allocate overhead costs to each unit produced, either based on a predetermined overhead rate or through allocation methods specified in the specifications.

4 Ensure Accuracy

- Double-check all calculations to ensure accuracy.
- Verify that all costs are accounted for and nothing is omitted.

5 Check Compliance with Specifications

- Review the specifications provided to ensure that the cost sheet meets all requirements.
- Verify that the cost sheet includes all necessary details and is presented in the required format.
- Confirm that the cost calculations align with any specific guidelines or criteria outlined in the specifications.

6 Evaluate the Cost Sheet

- Assess the overall cost structure and determine if it is competitive and feasible.
- Evaluate the profitability of the product based on the cost sheet.
- Identify any areas where costs can be optimized or reduced without compromising quality.

7 Seek Approval

- Present the cost sheet to relevant stakeholders or decision-makers for approval.
- Address any questions or concerns raised during the review process.

8 Finalize the Cost Sheet

- Make any necessary adjustments based on feedback received during the evaluation process.
- Ensure that the final version of the cost sheet accurately reflects the cost structure of the product.

9 Document and Maintain Records

- Keep a copy of the approved cost sheet for future reference.
- Maintain accurate records of cost data and any revisions made to the cost sheet over time.

By following these steps, you can prepare and evaluate a cost sheet to ensure that it meets specifications and accurately reflects to prepare and evaluate a cost sheet and ensure it aligns with specifications, you'll need to follow these steps

1 **Gather Information:** Collect all relevant data including material costs, labor costs, overhead expenses, and any other relevant costs associated with the production process.

2 **Format the Cost Sheet:** Create a standardized format for the cost sheet. Typically, a cost sheet includes sections for direct materials, direct labor, manufacturing overhead, and total costs.

3 **Calculate Direct Material Costs:** Sum up the costs of all materials used in the production process. This may involve looking at purchase invoices or material requisition forms.

4 **Calculate Direct Labor Costs:** Determine the labor costs associated with production. This could include wages, salaries, benefits, and payroll taxes for workers directly involved in manufacturing.

5 **Compute Manufacturing Overhead:** Manufacturing overhead includes indirect costs such as rent, utilities, equipment depreciation, and maintenance. Allocate these costs to the production process based on predetermined allocation methods.

6 **Summarize Total Costs:** Total up the costs from direct materials, direct labor, and manufacturing overhead to arrive at the total production cost.

7 **Check Against Specifications:** Ensure that the costs align with the specifications provided. This could involve checking that the materials used meet quality standards and that the labor costs are within budgetary constraints.

8 **Evaluate Cost Efficiency:** Compare the total production cost against the expected or budgeted cost. Analyze any significant discrepancies and identify areas where costs can be reduced or optimized.

9 **Document Assumptions and Calculations:** Document any assumptions made during the cost calculation process and provide a breakdown of how each cost component was determined.

10 **Review and Approval:** Have the cost sheet reviewed by relevant stakeholders such as management or finance personnel. Obtain approval once the cost sheet is deemed accurate and complete.

11 **Periodic Review:** Regularly review and update the cost sheet to reflect changes in production processes, material costs, labor rates, or overhead expenses.

By following these steps, you can prepare a comprehensive cost sheet that aligns with specifications and allows for effective cost management and control. the cost structure of the product.

EXERCISE 33 : Prepare Cost Sheet

Refer Exercise - 32

EXERCISE 34 : Various sheets used in garment export house

Objectives

At the end of this exercise you shall be able to

- analyse the sheets used in garment export house.

Here are some of the key sheets:

1 Purchase Order Sheet (PO Sheet)

- A purchase order sheet (or PO sheet) is an essential document used in garment manufacturing to handle export orders and shipments.
- Brands generate PO sheets for their manufacturers, containing information
- About production goals for the garment, including quantity, size breakdown, and color combinations

2 Specification Sheet (Spec Sheet)

- A specification sheet (or spec sheet) provides detailed information about the garment design and construction.
- It includes a sketch of the garment design and specifies how the garment should be constructed.

3 Documentation procedure sheet

- This sheet is used for obtaining approval from the central excise authority to remove goods from the factory for export shipments.
- It ensures compliance with export regulations and facilitates the smooth movement of goods.

Purchase order sheet in the garment industry

A purchase order sheet (or PO sheet) is an important document commonly used in garment manufacturing to handle garment export orders and shipments. A PO sheet is generated by the brand for their manufacturer with all the information about production goals for the garment, including quantity, size breakdown and color combos.

In general, the PO sheet includes all necessary information on a specific order lot and is followed by the merchandiser from raw materials booking to packing and preparing for export.

Some important aspects of a PO sheet in garment manufacturing include

1 The sheet organizes size breakdowns and order quantities.

2 It also arranged lot-wise or color-wise orders.

3 Very often a PO sheet includes packing specifications.

4 The shipment date can be also included in a PO sheet, to ensure the order is packed and shipped on time.

Garment manufacturers use the PO sheet to plan the cutting and sewing process. For large orders, the fabric is cut in bulk for each size. Weight, width and fabric type are taken into consideration before the cutting begins. The factory then creates a lay plan to determine how much fabric is needed to avoid excess waste. After the lay plan is finalized, the cutting of the fabric finally begins. Depending on the factory's capacities either a manual or computerized method of fabric cutting is used. (Fig 1)

Fig 1

Digital layplan optimizing

Once your purchase order sheet is complete, you will have a complete tech pack to share with your manufacturer. This will allow you to start a production run. By adding a preferred shipment date to your order sheet, you will also ensure your order ships on time.

That covers everything you need to know about purchase order sheets and adding them into your tech pack.

Specification sheet

A garment specification sheet, is a technical document that contains all construction details of the garment. It looks like a technical diagram or a sketch of a garment, including all of its measurements. Spec sheets are used by designers to communicate design concepts to manufacturers

List of information/ data found in a Garments specification sheet

1 Product sketch or design of front and back
2 Product Description
3 Product category, group, product code, and style name
4 Bill of material (BOM)
5 Garments Construction and necessary instruction to sew
6 Fabrics Specification
7 Label instruction
8 Points of measurements and their upper & lower tolerances
9 Size-wise measurements
10 Art-work
11 Sticker attaching instruction
12 Wash and Ironing/ pressing instruction
13 Embroidery and printing placement (If any)
14 Folding instruction
15 Packing instruction


[Company Name]

PURCHASE ORDER

[Street Address]
[City, ST ZIP]
Phone: (000) 000-0000
Fax: (000) 000-0000
Website

DATE 9/17/2015
PO # [123456]

VENDOR	SHIP TO
[Company Name]	[Name]
[Contact or Department]	[Company Name]
[Street Address]	[Street Address]
[City, ST ZIP]	[City, ST ZIP]
Phone: (000) 000-0000	[Phone]
Fax: (000) 000-0000	

REQUISITIONER	SHIP VIA	F.O.B.	SHIPPING TERMS

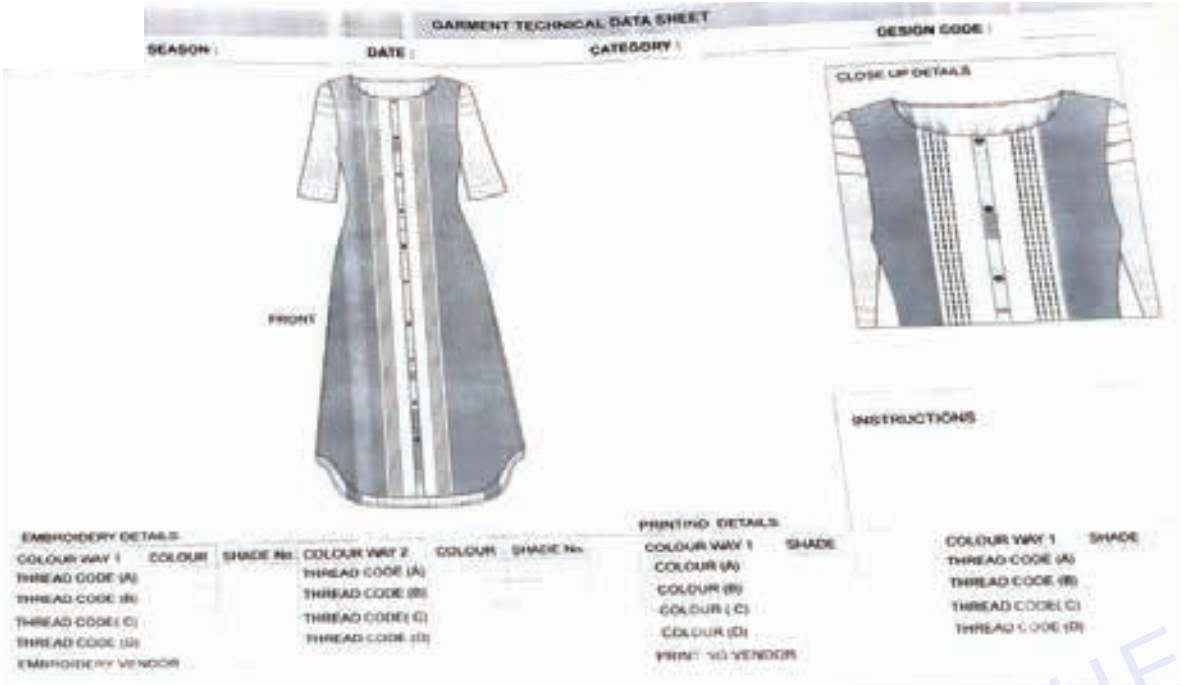
ITEM #	DESCRIPTION	QTY	UNIT PRICE	TOTAL
[2342342]	Product XYZ	15	150.00	2,250.00
[4564564]	Product ABC	1	75.00	75.00

SUBTOTAL	2,325.00
TAX	-
SHIPPING	-
OTHER	-
TOTAL	$ 2,325.00

Comments or Special Instructions

If you have any questions about this purchase order, please contact
[Name, Phone #, E-mail]

Put proper scanned pictures



Name: Shelley Koh

Spec Sheet - Top

Date:	22-Feb-2011	Revised Date:	1-Jul-2011
Style #	411-009	Season:	Spirng 2012
Size Range:	2T-5T	Classification:	Toddler
Label:	Janie and Jack	Group Name:	Sunkissed Blooms
Description:	classic buttondown plus a springtime twist with ruffles and puffy sleeves		

Sample Size: 5T

DATE:		1-Jul-2011	
POINT OF MEASURE:	TOL	PROTO 1	
width measurements are half/flat	+/-	IN	CM
1. Length (from HPS)	1/2	17	43.2
2. CF Length (from neck seam)	1/2	16	40.6
3. CB Length (from neck seam)	1/2	16 1/2	41.9
4. Side Length (from armhole seam)	3/8	12	30.5
9. Chest (1" below Armhole)	3/8	12	30.5
16. Across Back (4" from CB neck seam)	3/8	12	30.5
18. Shoulder Slope from HPS	1/4	1/2	1.3
26. Sweep	3/8	13	33.0
36. Sleeve Length (from Top of Armhole)	3/8	4 1/2	11.4
44. Armhole (Front)	1/4	5 1/2	14.0
52. Sleeve Opening	1/4	4	10.2
60. Front Neck Drop (HPS to seam)	1/8	1	2.5
61. Back Neck Drop (HPS to seam)	1/8	1/2	1.3
62. Neck Width (HPS to HPS)	1/4	5	12.7
12. Collar Width	1/8	1 1/2	3.8
72. Front Height fron HPS to Center of Ruffle	1/4	8	20.3
73. Back Height fron HPS to Center of Ruffle	1/4	8	20.3
53. Sleeveband Width	1/8	1/2	1.3

Front Sketch

Documentation procedure sheet

This sheet is used for obtaining approval from the central excise authority to remove goods from the factory for export shipments.

Required shipping documents

- Commercial Invoice
- Bill of Lading (BOL)
- Air way bill
- Certificated of Origin
- Export Packing List
- Inspection Certificate
- Export & Import Licence

Fabric Inspection

The “quality” of fabric from your supplier doesn’t meet your standards. In fact, it has a lot of problems. Fabric inspection reveals countless defects ranging from drop stitches to color shading variation.

The 4-point system is the industry standard for evaluating fabric quality in the inspection industry. This system assigns penalty points to a roll of fabric according to defect size, quality and significance.

But you must understand the different types of fabric defects to look for before you can use the 4-point system.

Fabric defects

- Horizontal lines
- Shade variation
- Dirt/stains
- Uneven dyeing
- Drop stitches
- Misprinting
- Crease marks
- Barre
- Neps/knots
- Abrasion marks
- Splicing
- Holes
- Defective selvage
- Snags
- Thick place/thin place
- Bowing and skewing
- Needle lines
- Coarse pick
- Coarse end
- Broken pick
- Broken end
- Missing end/end out
- Filling bar

1. Horizontal Lines

This fabric defect is defined by irregular lines that run from side to side.(Fig 1)

Causes

Horizontal lines are generally caused by:

- Faults in the bobbin (the barrel used to hold yarn in place)
- Irregular thread tension

Prevention

Preventing the appearance of horizontal lines in fabric is quite straightforward. Regularly replace the bobbin and frequently check thread tension and positioning.

2. Shade Variation

One of the more obvious visual defects that can be found on raw textiles, shade variation is defined by a difference in depth of shade and color from roll to roll or piece to piece. Shade variation in fabric is caused by:(Fig 2)

Fig 1

Fig 2

Causes

- Mixing of fabrics used in production
- Variations in the production process with regard to time and speed
- Improper cutting, bundling and/or numbering
- Unequal fabric stretching

Prevention

Using the same base material and set of parameters for each production lot can effectively prevent shade variation.

When visiting a factory that manufactures raw textiles, it's critical to ensure workers are only combining garments of the same color and not taking shortcuts when cutting and bundling. Properly numbering textile types prevents mistakenly combining cuts that vary in shade.

3 Dirt/Stains

Stains are fairly common among dyed textiles and are defined as spots or patches of differing color. Textiles are never truly safe from stains because they can occur anytime during or after production if they're not kept in an area with adequate protection.

Causes: Stains can appear on fabrics from just about any source. Dirt from the factory floor, oil from machinery and dyes are all known sources. Stains are relatively easy to identify and prevent so long as suppliers are vigilant about fabric quality.

Prevention

Your manufacturer can prevent stains during production by regularly cleaning production machines and equipment to ensure no random oils, grease or dyes make their way onto the textile. (Fig 3)

Wrapping the finished rolls of fabric in plastic and storing them in a separate area away from the dying area can help avoid post-production stains.

4 Uneven Dyeing/Printing/Dye marks

Dye marks are irregular patches on the surface of raw textiles. Dye marks are typically the result of: (Fig 4)

Fig 3

Fig 4

Causes

- Low quality base fabric
- Improper leveling agents
- Incorrect pH in the production process
- Dye machine entanglement

Prevention

Ensuring there are no initial problems with the base fabric prior to stitching can help prevent dye marks. Any issues missed will be present in later production processes.

Other preventative measures include maintaining the correct pH level, using an appropriate dying agent and using a backup power generator to ensure production machines don't shut down during use.

5. Drop Stitches

One of the most common quality issues found in raw textiles, drop stitches are holes or missed stitches that appear randomly in the fabric. (Fig 5)

Causes

Drop stitches are typically caused by:

- Incorrect set-up of yarn carriers
- Slubs and knots
- Yarn overfeeding or underfeeding
- Loose stitching during the production process

Prevention

Checking the yarn carrier and any other machines to verify they're set to the right tension during production can prevent drop stitches. You can minimize the occurrence of drop stitching in your fabric or textile by regulating the yarn feed rate.

Resetting the pattern chain can fix this issue.

6 Misprinting, OFF Printing Or Absence Of Printing

Misprint defects are only relevant to printed fabrics. Misprint is when the print of the fabric does not match your specified design. This is usually displayed in one of the following ways:

Causes

- Colors and/or patterns are completely or partially missing
- Colors and patterns are incorrectly positioned relative to each other

Prevention (Fig 6)

Fig 5

Fig 6

Misprints are most often the result of:

- Wrong dyeing recipe
- Wrong leveling agent
- Incorrect dye combinations in lots
- Improper scouring of grey fabric

Implementing uniform dyeing, leveling and scouring processes can help prevent misprinting. If you're sourcing a printed fabric, make sure to provide clear specifications regarding the colors and patterns of your printed fabric to your factory. Consider providing pantone color numbers and design files as a guide for your supplier.

7 Crease Marks

A crease mark is a visible deformation in fabric. A crease mark differs from a crease streak, as it's unlikely to appear for an entire roll. Rather, it appears in just one spot on the fabric. (Fig 7)

If final pressing cannot restore fabric to the original condition, a crease mark will be left on the final product. Discoloration can also be a problem associated with this fabric defect.

Causes

Crease marks often happen when fabric passes through squeeze rollers in the dyeing process. Creasing is inevitable as fabric is fed through machines in rope form. But if properly handled, crease marks should not be permanent.

Crease marks can be caused by:

- Inadequate preparation, relaxation or bulking of fabric
- Poor quality of fabric: a tight construction, high twist yarns or dense weight
- Poor suitability of machine: not moving folds properly
- Incorrect loading of fabric into machine, resulting in twisted or knotted rope
- Excessively rapid heating or cooling rates

Prevention

Along with rectifying these issues, using anti-crease agents during the scouring process prior to dyeing can help prevent crease marks.

8 Barre

A barre is an unintentional, repetitive visual pattern of continuous bars and stripes.(Fig 8)

Fig 7

Fig 8

Causes: Barre will typically appear as a horizontal streak of light or dark bars running the width of the fabric. The bars must appear in a repetitive pattern to be considered barre. Barre is typically found parallel to the filling of woven fabric or to the courses of circular knit fabric.

Barre is usually not detected until after the processing of fabric at the end of production.

Prevention: Barre is a result of physical, optical or dye differences in yarns or geometric differences in fabric structure. Any combination of these differences can cause this fabric defect.

Like many fabric defects, it's easier to prevent barre than to try and rectify it after production. Consistency in raw material organization and labeling can help prevent mix-ups leading to barre, as well as continual equipment maintenance. Following a First In First Out (FIFO) inventory system can help ensure consistent material flow and usage.

9 Neps/Knots

Neps are small, tightly tangled knot-like masses of unorganized fibers that form a pinhead shape. These knots are usually comprised of dead or immature fibers.(Fig 9)

Neps can be categorized into three types:

- **Biological:** Found in raw materials, these neps contain foreign material such as seed coat fragments, leaf or stem materials. The manufacturer can usually remove them through wet processing.
- **Mechanical:** Found in ginned lint, card web, yams and cloth, these neps are largely a result of mechanical processing.
- **White speck neps:** Generally not visible until dyeing, white speck neps contain immature clusters of fibers and are considered the most severe type of neps.

Causes and of neps

Neps are caused when spools of yarn are tied together. This might be a result of:

- Accumulation of fly and fluff on machinery
- Poor lint cleaning
- Poor carding and incomplete removal of neps before processing

Prevention: To prevent neps and knots, ensure proper maintenance and cleaning of machinery and roller clearers. Neps can be removed through combing before processing, so early detection of neps is critical to preventing neps in finished fabrics.

10 Abrasion Marks

An abrasion mark is a discolored area damaged by friction or rubbing. (Fig 10)

Abrasion marks are sometimes also referred to as chafe marks or bruised places.

Causes and of abrasion marks

Chafing or impact with a hard or rough surface usually causes abrasion marks. For instance, scratches on the breast beam of the loom might cause chafing.

Abrasion resistance is the ability of a fabric to withstand surface wear and rubbing. Fiber, yarn and fabric properties and finishing processes are the main factors that determine abrasion resistance.

Prevention: Using fabrics that are more abrasion resistant can help reduce abrasion marks. Nylon is generally regarded as having the best abrasion resistance, followed by polyester.

Fig 9

Fig 10

11 Splicing

Splicing is the overlapping of the cut ends of two pieces of fabric (the end of one length of fabric and the beginning of another) to ensure continuous spreading. Splicing is necessary as one roll of fabric finishes and the next is taken into use.

Causes: The overlapping ends of fabric produce a waste material in manufacturing. Splicing losses can vary up to five percent of total fabric usage. Importers can ensure greater manufacturing efficiency by minimizing splicing in their fabric. (Fig 11)

Many importers assign four penalty points under the 4-point system for each splice found during fabric inspection.

Prevention: The position of the splice in a roll of fabric often depends on the overall fabric quality. Splicing is often used to compensate for other fabric defects, like stains or holes, by removing these from the final roll.

So improving overall fabric quality and preventing other fabric defects can often help to minimize splicing losses.

Setting a maximum length tolerance for splicing in each roll of fabric with your supplier can help to clarify your expectations (e.g. no more than one splice every 30 meters). Be sure to consult your supplier on this tolerance before production to ensure it is achievable.

12 Holes

A hole is an imperfection where one or more yarns are sufficiently damaged to create an opening in the fabric. (Fig 12)

Fig 11

Fig 12

Holes are typically treated as a major defect in the fabric and are assigned either two or four penalty points during fabric inspection, depending on their size.

Causes

Holes are usually caused by an accidental cut or tear to the fabric. Broken needles or rough mechanical parts are common culprits for fabric tearing during manufacturing.

Prevention: Prevent future holes by ensuring your supplier has procedures in place to regularly check needles and machinery prior to production.

13. Defective Selvage (Cut, Waved Or Creased)

Selvage is the densely woven edge of a piece of fabric. Most often used in reference to woven fabrics, the selvage is supposed to keep the fabric from unraveling or fraying.(Fig 13)

Selvage can be defective in a number of ways, including cut, waved or creased. Cut selvage might also be referred to as broken selvage or ripped selvage.

Causes

There are two main culprits for defective selvage:

- An incorrect loom adjustment during weaving
- Improper edge construction

Prevention: Correctly adjusting the loom and properly constructing the edges of the fabric should prevent this defect.

14. Snags

A snag is a part of the yarn that is accidentally pulled or plucked from the surface. Usually it appears as a large loop of yarn above the surface of the fabric. (Fig 13)

In warp knits, the snag occurs in the wale direction. In weft knits, the snag occurs in the course direction.

Causes

In the case of continuous filament yarns, snagging is typically caused by mechanical strain during knitting. Sharp points and objects can cause the fabric snag at any time. Inspect the fabric contact points on all the processing machines to identify and fix any sharp points.

Prevention: Some fabrics are more prone to snagging than others due to their composition. You can conduct a mace snag test to determine a fabric's resistance to snagging. During this test, a miniature mace (a spiked ball) will track randomly across a fabric sample to predict actual wear and snagging.

15 Thick Place/Thin Place

These are unintentional changes in fabric appearance as compared to adjacent construction. If the thick or thin place is more than one inch wide, it is typically classified as a major defect in fabric inspection. (Fig 14)

Fig 13

Fig 14

A thick place will appear as a small area of more closely spaced yarns or by a congregation of thick yarns. A thin place is the opposite, as the fabric will appear to have loosely spaced yarns or a congregation of thin yarns.

Causes

Main causes of thick and thin places include (Fig15)

- Irregular let-off
- Incorrect setting of holding and releasing pawls on the ratchet wheel of take-up motion
- Gears of take-up motion not meshing properly
- Gear wheel teeth worn out or broken

Fig 15

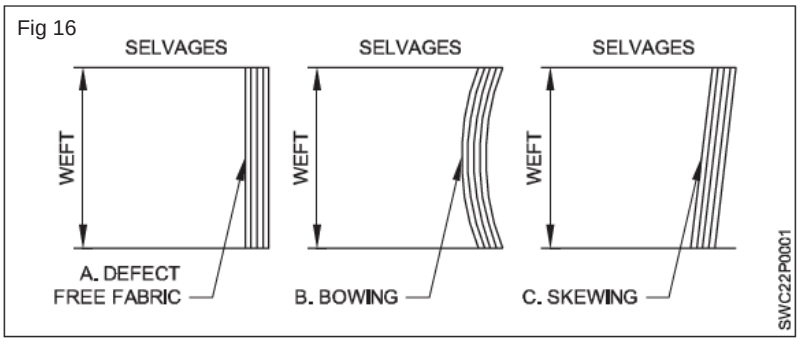
Prevention

Ensuring proper training of factory personnel to set the let-off and/or take-up motion properly can help prevent this fabric defect.

16 Bowing and Skewing

Bowing is a condition in woven textiles where filling yarns are displaced from a line perpendicular to the selvages and lie in an arc across the width of the fabric. Bowing appears as rows of courses or yarn-dyed stripes forming a bow shaped curvature along the fabric width. (Fig 16)

Fig 16



Skewing is a similar condition in which filling yarns are angularly displaced from a line perpendicular to the edge or side of the fabric.

Bowing and skewing affects striped or patterned fabric quality more than for solid color fabrics, as the greater contrast in patterns makes the distortion more prominent.

Causes

Bowing and skewing can be caused by an uneven distribution of tension across the fabric width during dyeing or finishing processes. Improper stretching during scouring, dyeing or finishing might also cause bowing or skewing.

Prevention: Correcting the tension settings on processing machines should rectify these defects. You can also ask your supplier to fix bowing and skewing found during fabric inspection by reprocessing the fabric through a compactor or straightening machine.

17 Needle Lines

Needle lines appear in weft knit fabrics, and appear as prominent vertical streaks or lines in the fabric.

Causes

Defective needles are a direct cause for needle lines. Needle latches, hooks or stems might be: (Fig 17)

- Mixed
- New
- Dirty or contaminated with lint
- Bent
- Worn

Prevention: If needle lines occur individually, you'll likely only need to trace the needle line to the associated defective needle and replace it to prevent further needle lines. If needle lines appear in a band, you'll likely need to replace multiple defective needles.

An improper dial or cylinder condition with the machine might also cause needle lines. Verify that your supplier has established and maintained proper maintenance and cleaning policies to prevent future issues with needles and equipment.

18 Coarse Pick

A coarse pick is where the filling yarn used in the fabric is unusually large in diameter. (Fig 18)

Fig 17

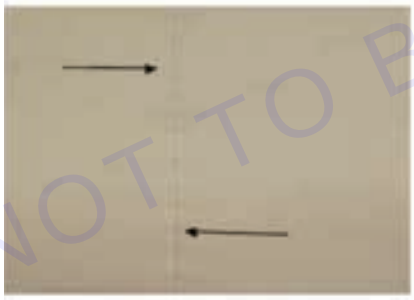


Fig 18

This defect is also known as coarse filling or thick filling.

Coarse pick is usually classified as a major defect during fabric inspection.

Causes and Prevention

Probable causes for coarse pick include:

- Lashing of broken end with adjoining end at roving frame
- Disturbed weight of back-top rollers at roving frame and ring frame cause the material to slip under the backtop roller and crease a coarse yarn.

19 Coarse End

Coarse end appears in fabric with warp yarn. (Fig 19)

Also known as heavy end, this is when the warp end is larger than normal in diameter, even sometimes double in size. The opposite is a fine end, when the warp end is smaller in diameter than normal.

The diameter of the yarn is too large, irregular or contains foreign material, which inhibits a smooth, even fabric.

Causes

Coarse end is caused when two bobbins of roving (wool that has been run through a mill on a carding machine) are running together during spinning. The process of running two bobbins together during spinning is commonly referred to as doubling and is used to remove variations in thickness.

Prevention: To prevent coarse ends, ensure there are no knots, irregularities or foreign materials in the roving prior to doubling.

20 Broken Pick

This defect appears as a broken filling yarn in the fabric weaving. It appears as a sharp discontinuity in the weave pattern over the pick length. (Fig 20)

Fig 19

Fig 20

Causes: and prevention of broken pick

A broken pick is the result of a break or cut in filling yarn, which results in the insertion of a partial pick in the fabric.

This can happen after weft break, weft exhaustion or a faulty weft fork mechanism. Correcting weft stop motion will ensure broken picks are detected before they're inserted into the fabric.

Prevention: Ensuring weaving personnel are trained to identify and replace a broken pick during production can also help prevent the appearance of this defect in the finished goods.

21. Broken End

A broken end appears as a broken, untied warp end of a fabric. (Fig 21)

The yarn is usually broken during weaving or finishing. Broken ends appear as equidistant horizontal lines along the fabric width.

Causes and prevention: This defect is caused by yarn breakage. When the yarn breaks during weaving or finishing and is then woven into fabric the result is a broken end.

Some possible causes for broken ends include:

- Poor preparation
- Weak or irregular yarn
- Excessive warp tension

22 Missing End/End Out

This defect will appear in fabric as a fine warp-way crack until the weaver rectifies it. (Fig 22)

Fig 21

Fig 22

A missing end typically appears at the selvage of the fabric. Missing end is also known as “end out” and is typically classified as a major defect during fabric inspection.

Causes and Prevention

A missing end occurs when an extra piece of filling yarn is jerked into the fabric by the shuttle. This happens when a warp yarn is broken or missing during weaving.

Your fabric may end up with missing ends if a weaver improperly draws broken ends in place or the warp stop motion isn’t properly functioning. Weaving should stop immediately when a yarn breaks to prevent introducing missing ends into the fabric.

23 Filling Bar

A filling bar, also known as a weft bar, is a visual band or bar across the full width of fabric. (Fig 23)

The area will contain less than the normal number of picks, appearing different from the rest of the fabric.

Causes and Prevention

There are three main causes of a filling bar:

- Defective spinning processes that lead to a variation in the count of weft yarn
- Mixing of different counts or different twist yarns
- Faulty take up motion on the looms

Ensure your supplier has proper controls and organizational processes to eliminate mix-ups and segregate yarn to prevent this fabric defect. In addition, ensure proper operation of spinning and loom machinery to eliminate mechanical causes.

Defects of Accessories

Button & Button hole

The buttons are not fitting in the button holes resulting change in the shape or forming wrinkles.

Cause

• Carelessness of the Operator

- Wrong marking of buttons/holes
- Wrong cutting for making the button holes., (Fig 24)

Fig 23

Fig 24

Broken Buttons

Cause

- Due to excess pressure of the pressure foot of the machine
- Due to high speed of the machine (Fig 25)

Zip

Use of defective or damaged accessories like zip during stitching operation.

Cause

- Carelessness of the operator
- Poor quality of accessories. (Fig 26)

Fig 25

Fig 26

EXERCISE 35 : Measure & Check as per spec. sheet

Refer Exercise - 32

EXERCISE 36 : Revise Earlier Contents

Refer Exercise - 37 - 39

MODULE 9 : Revision of Software

EXERCISE 37 : Practice of CAD

Refer Module - 3

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EXERCISE 38 & 39 : Practice CorelDraw / Photoshop

Refer Module - 2

— — — — —

EXERCISE 40 : Design a garment using Fashion Studio

Objectives

At the end of this exercise, you will be able to:

- create a new fashion studio file
- select a model
- create and drape a new dress no a model.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

TASK 1: **Create a new fashion studio file**

1 Double click the icon DESIGN STUDIO on the desk top*

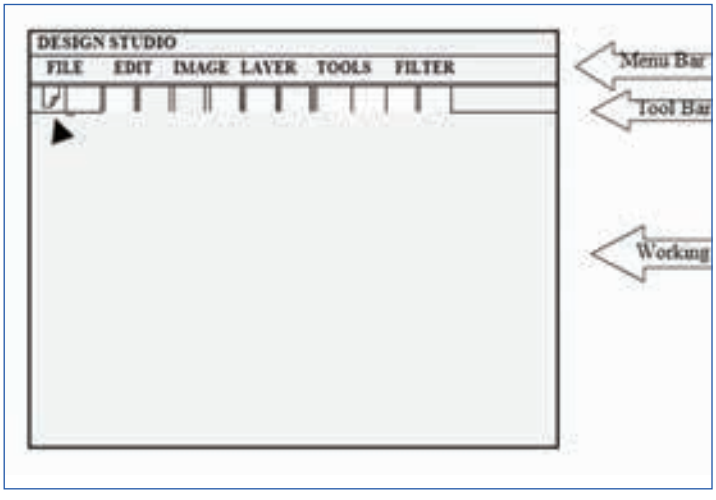
OR

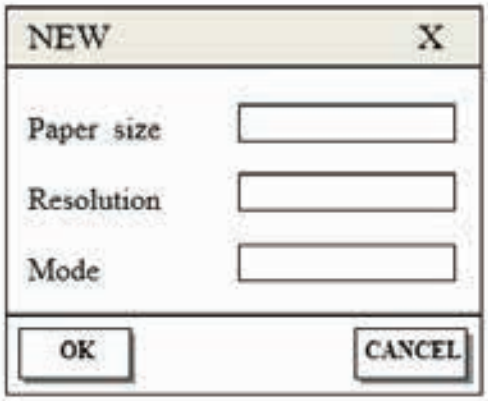
Choose all programme > DESIGN STUDIO> from the start menu.

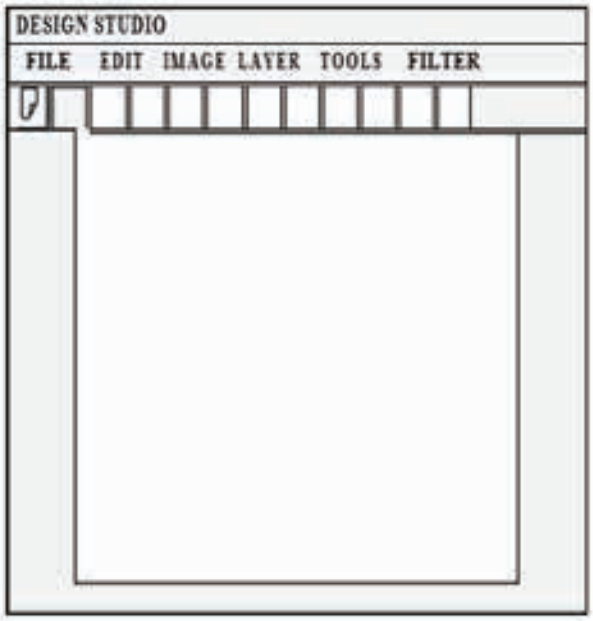
2 Click icon NEW  in the tool bar.

3 Enter data in NEW dialog box

4 Click OK (Fig 2) and Save the file.



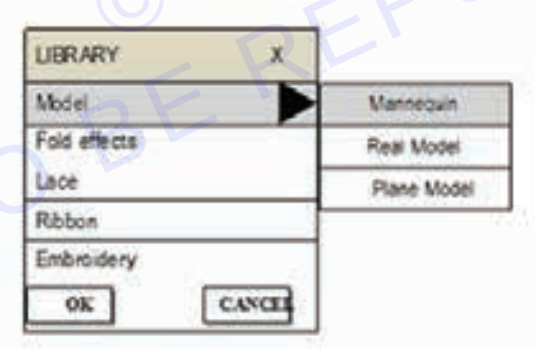




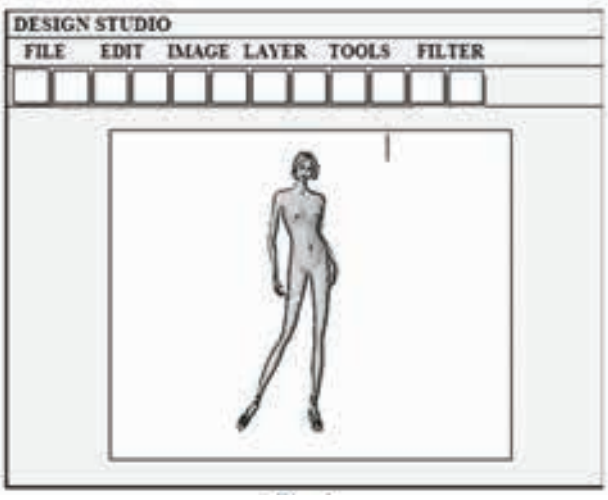
TASK 2: **Select model**

1 Select model from library of menu bar.

2 Select the type of model to see the different varieties of models from library pictures which are displayed on the bottom of the working area.



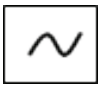
4 Choose a model from the displayed collections, click on the model and drag to the working area..



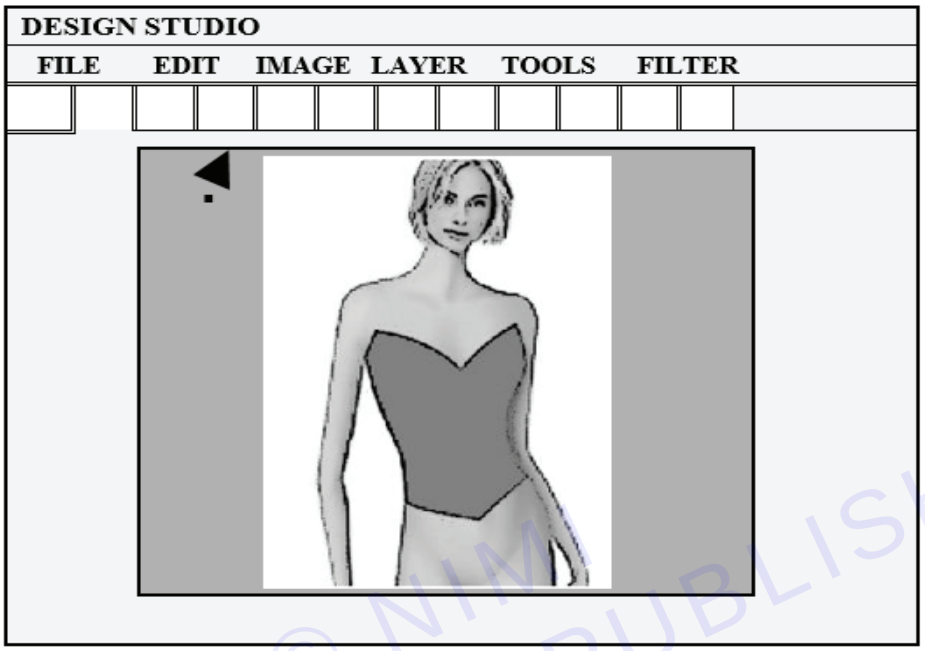
TASK 3: **Create and drape a new dress to a model - 2D**

1 Create a new file.

2 Select a model.

3 Select the curve tool icon. 

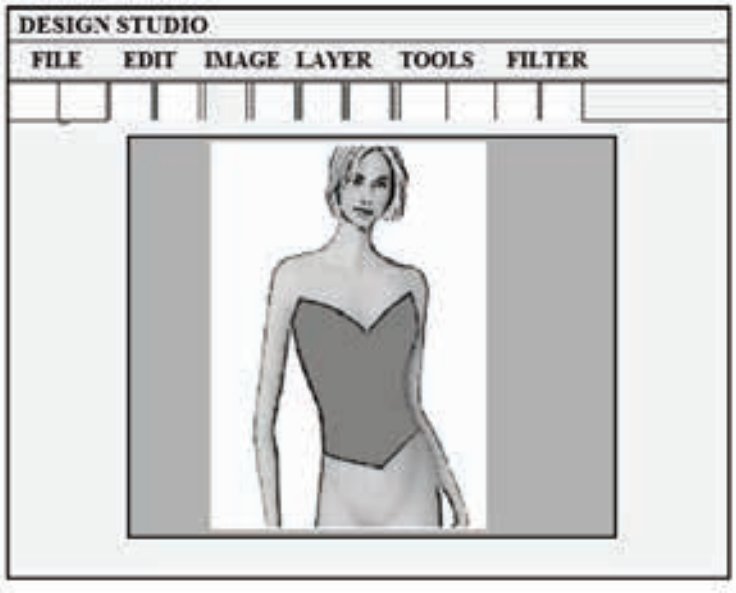
4 Draw the outline of the garment with the help of curve tool.



TASK 4: **Insert color**

1 Select color from image of menu bar.

2 Click OK



Add 3D effect to the designed garment

Objectives : At the end of this exercise, you will be able to:

- add 3D effect to the designed garment.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

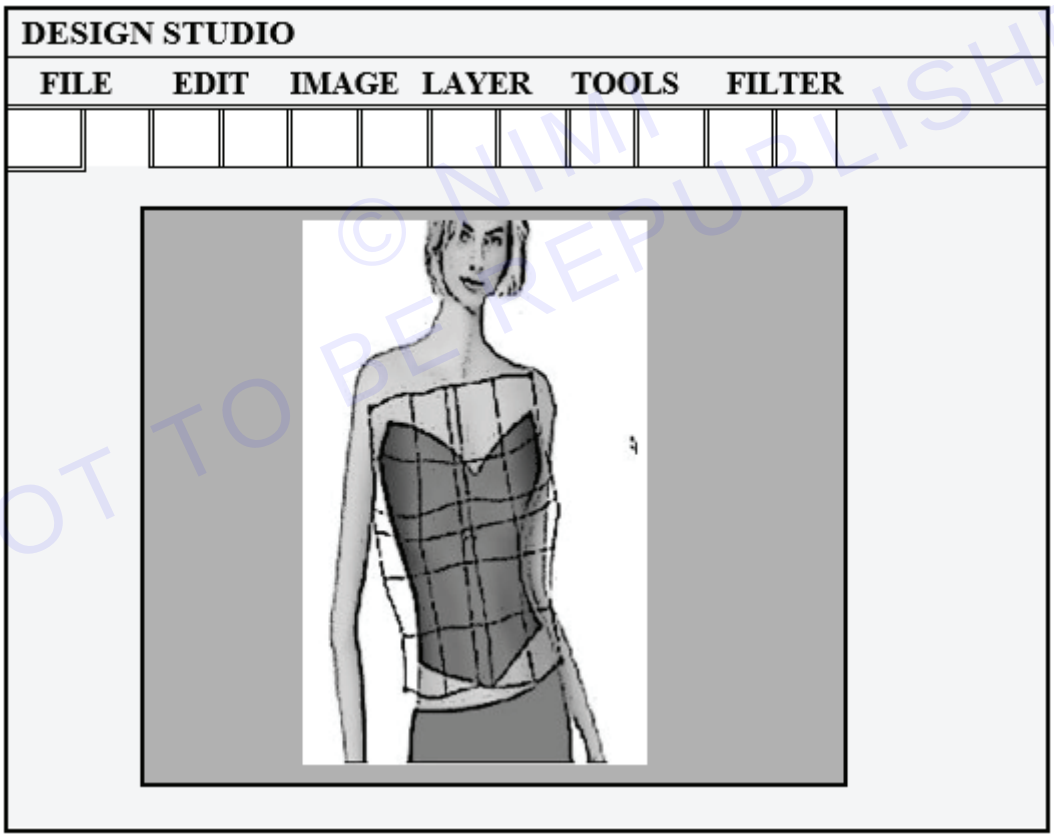
TASK 1: **Add 3D effect to the designed garment**

1 Create a new dress design to a model,

2 Select surface grid from edit of menu bar.

3 Drag the points to adjust the outline of the grid.

4 Apply standard inbuilt grid on the garment to get a 3D visualization with surface grid.



Create Folding effects on garment

Objectives : At the end of this exercise, you will be able to:

- create folding effects on garment.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

TASK 1: **Create new dress to a model**

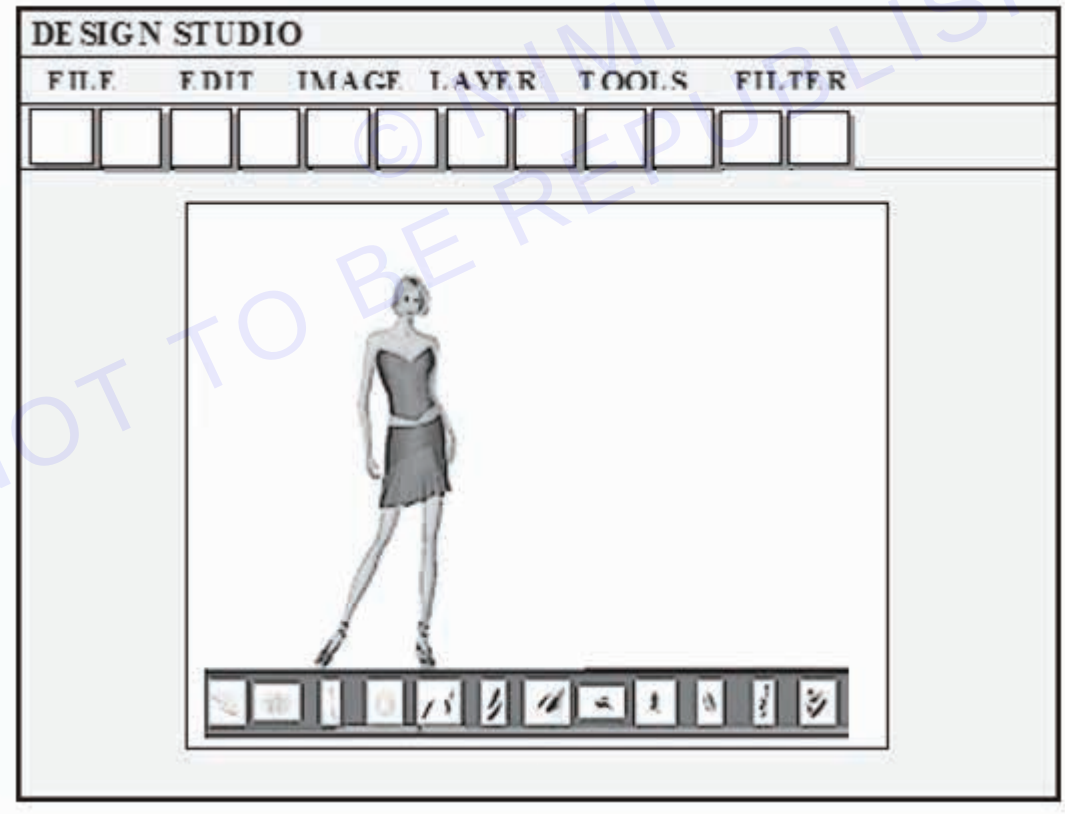
1 Design a new garment to a model.

2 Add 3D effects.

3 Go to library of menu bar.

4 Select required type of folds from the fold tool.

5 Click and drag the selected fold on the garment a suitable place to view the fold effect



Attach lace on a garment

Objective: At the end of this exercise, you will be able to

- apply lace on the garment
- apply modification on lace design.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

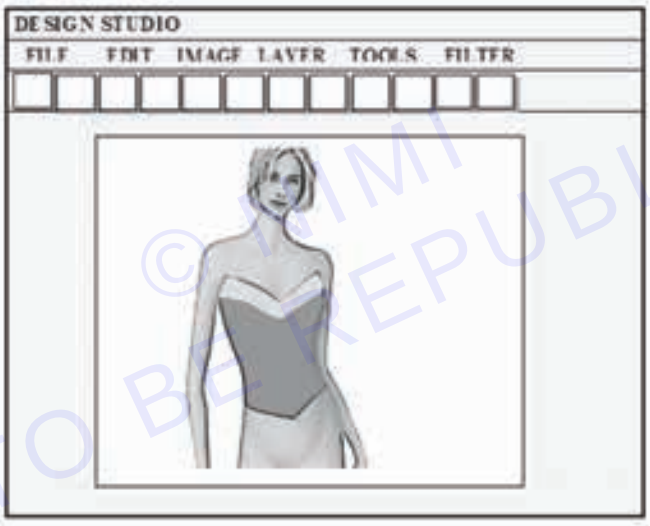
TASK 1: **Apply lace on the garment**

1 Create a new dress to a model.

2 Add 3D effect.

3 Select create tape tool icon for defining the portion to add lace.

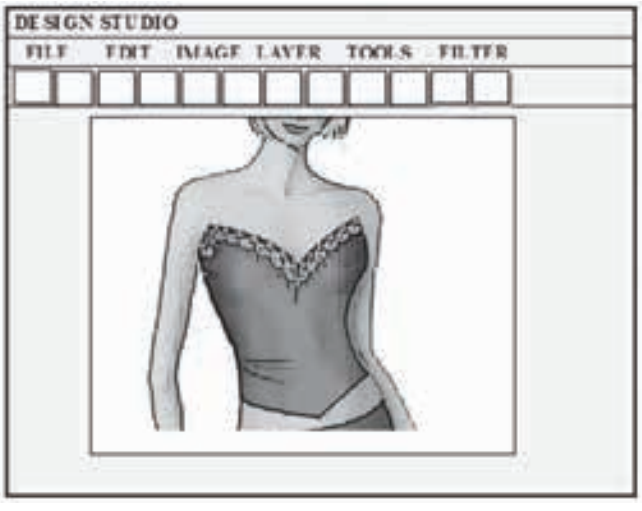
4 Draw as per the outline of the garment.



5 Go to library of menu bar.

6 Select lace.

7 Click and drag the selected lace on the garment.



TASK 2: **Apply modification on lace design**

1 Select edit surface grid.

2 Click on the lace surface and modify the lace shape and size.

3 Select the lace and Double click on it to go to texture studio for opening a new window with the selected lace.

4 Select colour from image of menu bar to change the lace colour.

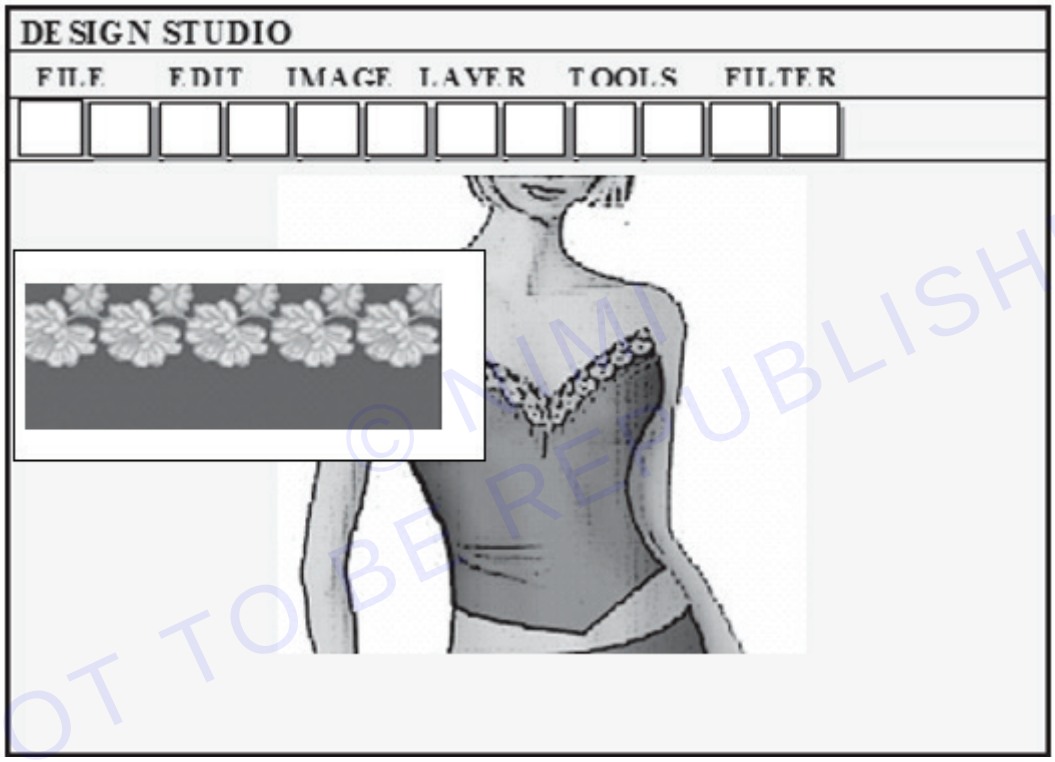
5 Click OK.

6 Select the pen tool and select hue pen.

7 Drag the pen tool over the lace area to change the colour of the lace.

8 Double click on the working area to close the window and to return to the studio.

9 Do the further modifications if required.



Apply ribbon on the garment

Objectives : At the end of this exercise, you will be able to:

- apply ribbon on the garment
- apply modification on ribbon.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

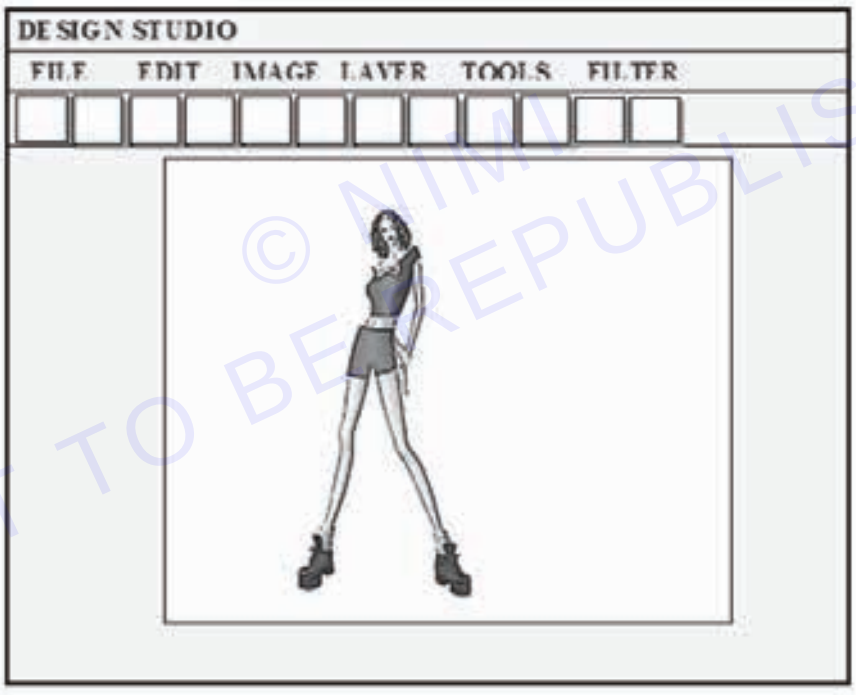
Procedure

TASK 1: **Apply ribbon on garment**

1 Create a new dress to a model and add 3D effect.

2 Go to library of menu bar and select ribbon.

3 Click and drag the selected ribbon on the garment



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TASK 2: **Apply modification on ribbon**

Refer Previous task.

Attach button on a garment

Objectives : At the end of this exercise, you will be able to:

- attach button on a garment

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

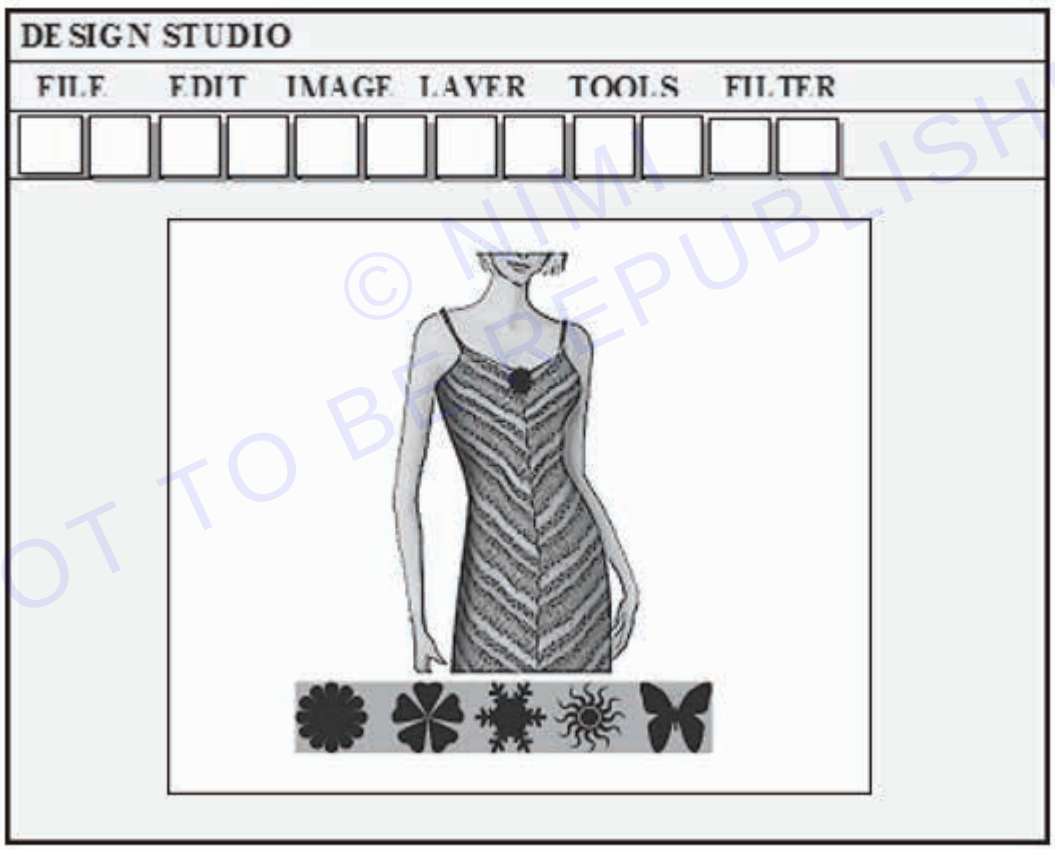
Procedure

TASK 1: **Attach button on the garment**

1 Create new dress to a model and add 3D effect.

2 Go to library of menu bar and select Button.

3 Click and drag the selected suitable buttons on the garment at required places.



Insert embroidery work on the garment

Objectives : At the end of this exercise, you will be able to:

- add embroidery design to the garment
- create variations in designs
- apply the embroidery design on the garment.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

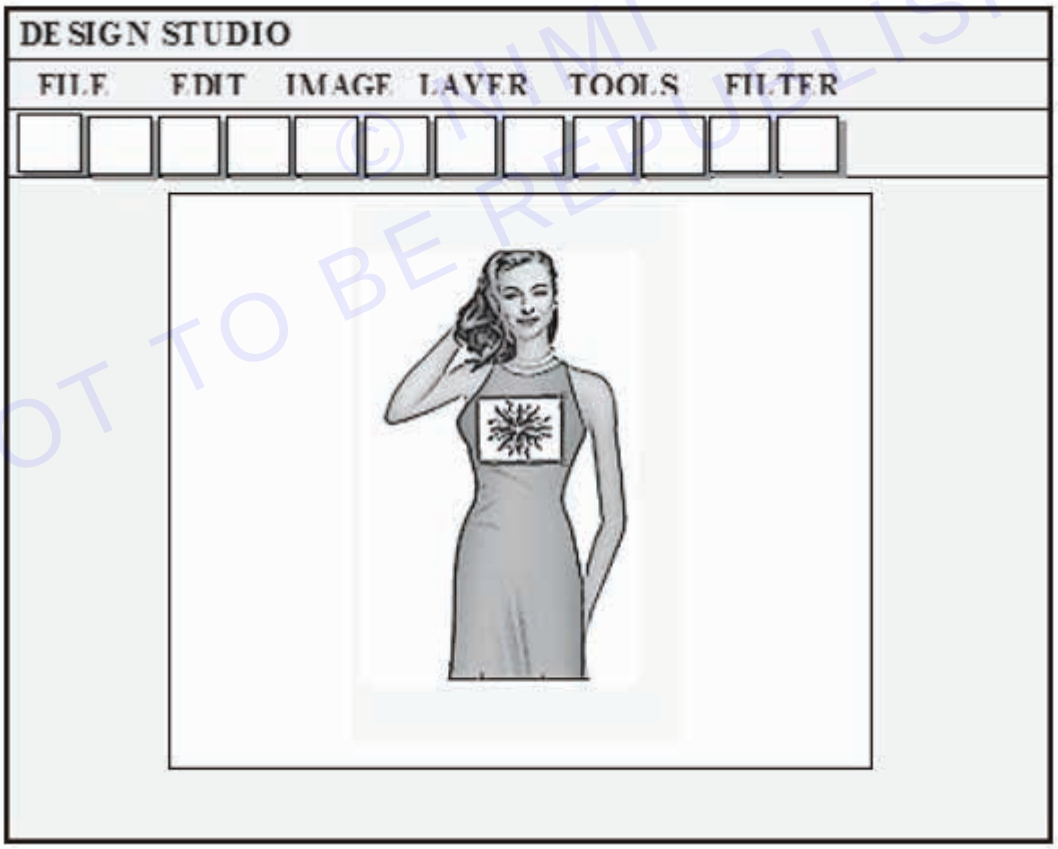
TASK 1: **Add embroidery design**

1 Create a new dress to a model.

2 Go to library.

3 Select embroidery.

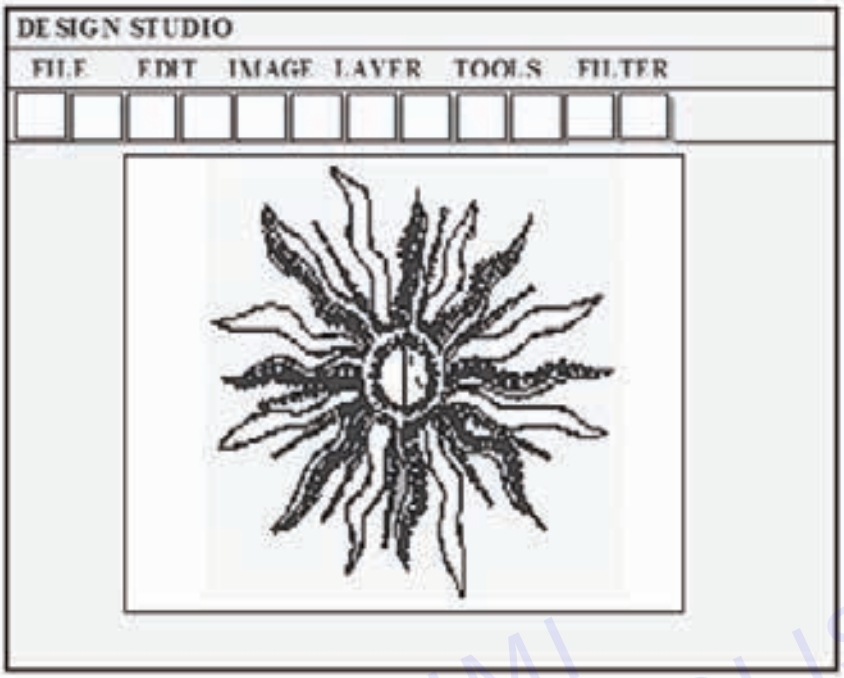
4 Click and drag the pictures on the dress.



TASK 2 : **Create Variations in designs**

1 Double click on the picture to make any change on the design.

2 Select fill color to change the color.



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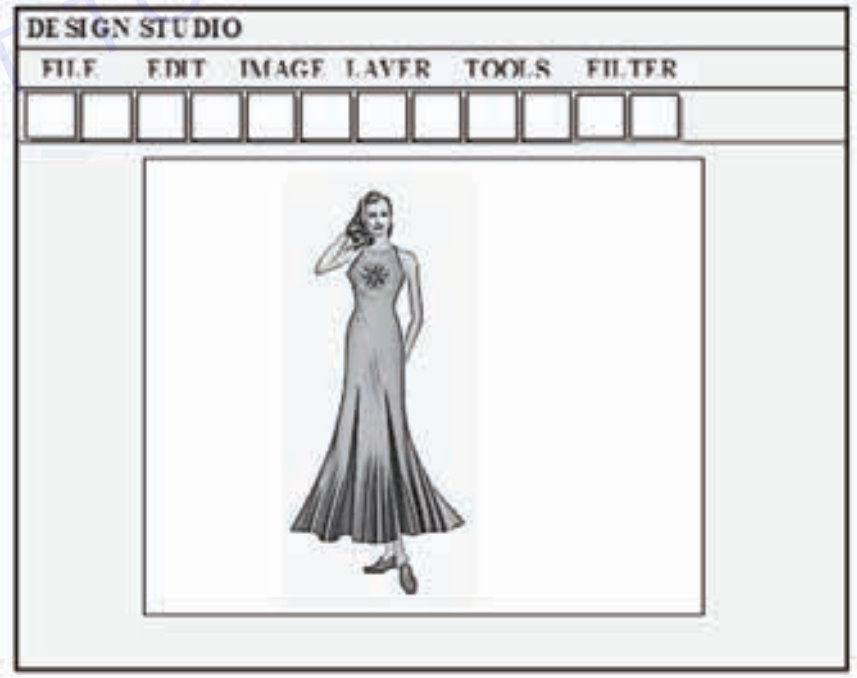
TASK 3 : **Apply the Embroidery Design on the garment**

1 Double click on the working area to view the full picture

2 Click and drag the embroidery design.

3 Apply the design on the garment at suitable place.



Create a new fabric weave and apply on dress

Objectives : At the end of this exercise, you will be able to:

- create and apply a new fabric weave on dress

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

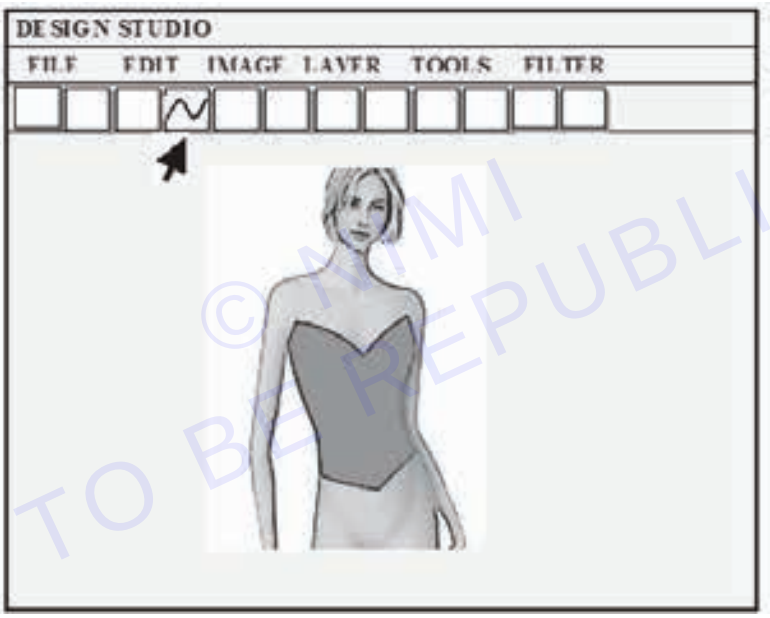
Procedure

TASK 1: **Create a new fabric weave and apply on dress**

1 Create a new dress to a model.

2 Select the curve tool icon.

3 Draw the outline of the garment with the help of curve tool.



4 Go to Filter of menu bar.

5 Select weave.

6 Double click on the picture to make any change on weaves.

7 Select the weaves and change the color.

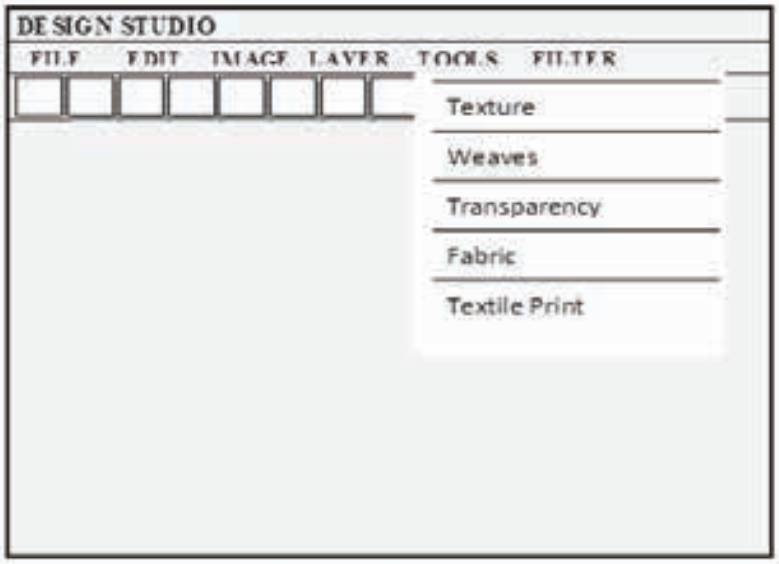
8 Double click on the picture to view the weave of the working area in a new window, certain number of other weaves is displayed at the bottom.

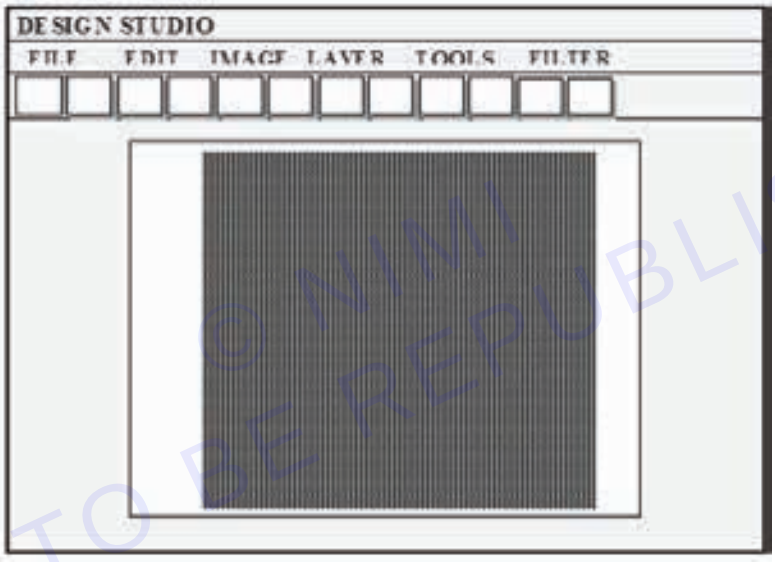
9 Click on the weaves and drag to change the weaves.

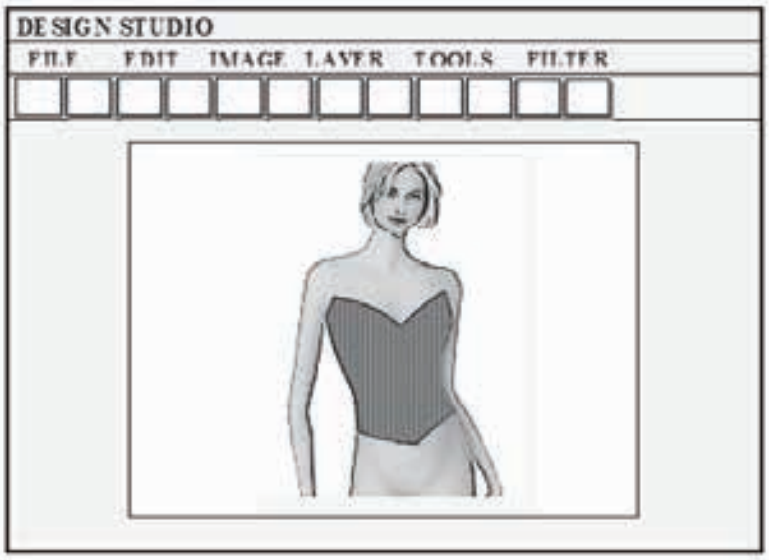
10 Double click on the working area to view the full picture

11 Click and drag the weave to apply on the garment.

Note : This is automatically updated on the texture layer.







Create transparent effect on dress

Objectives : At the end of this exercise, you will be able to:

- create transparent effect on dress.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

TASK 1: **Create transparent effect on dress**

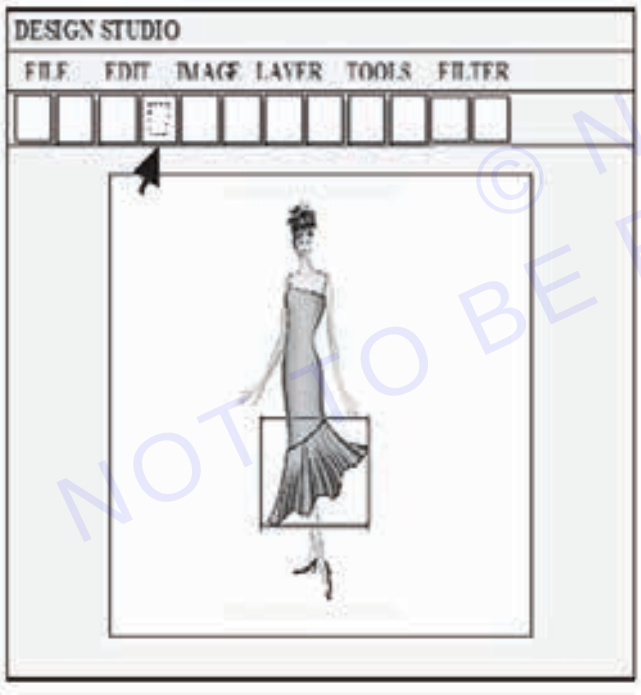
1 Create new dress to a model and add 3D effect.

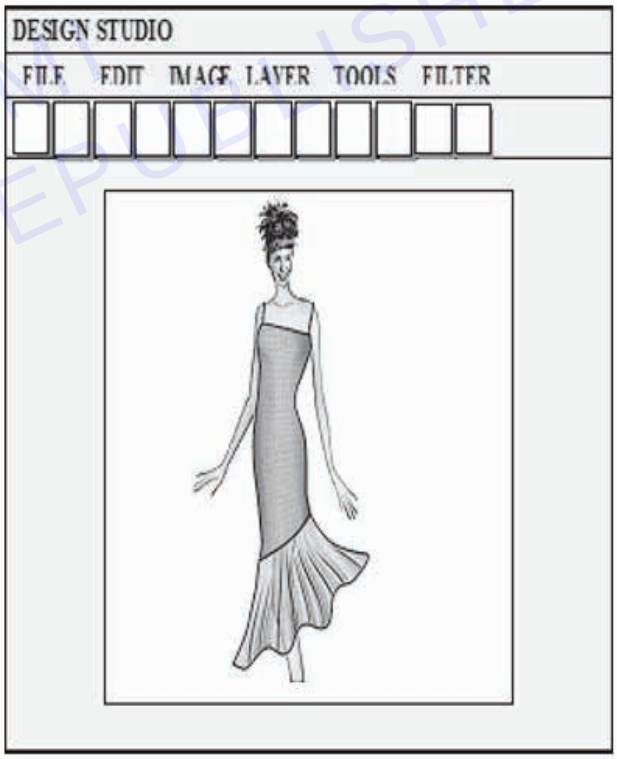
2 Select the selection tool icon

3 Select the particular area which has to be given a transparency effect.

4 Go to Filter of menu bar.

5 Select Transparency.





Apply texture variation in a garment

Objectives : At the end of this exercise, you will be able to:

- apply texture variation in a garment.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

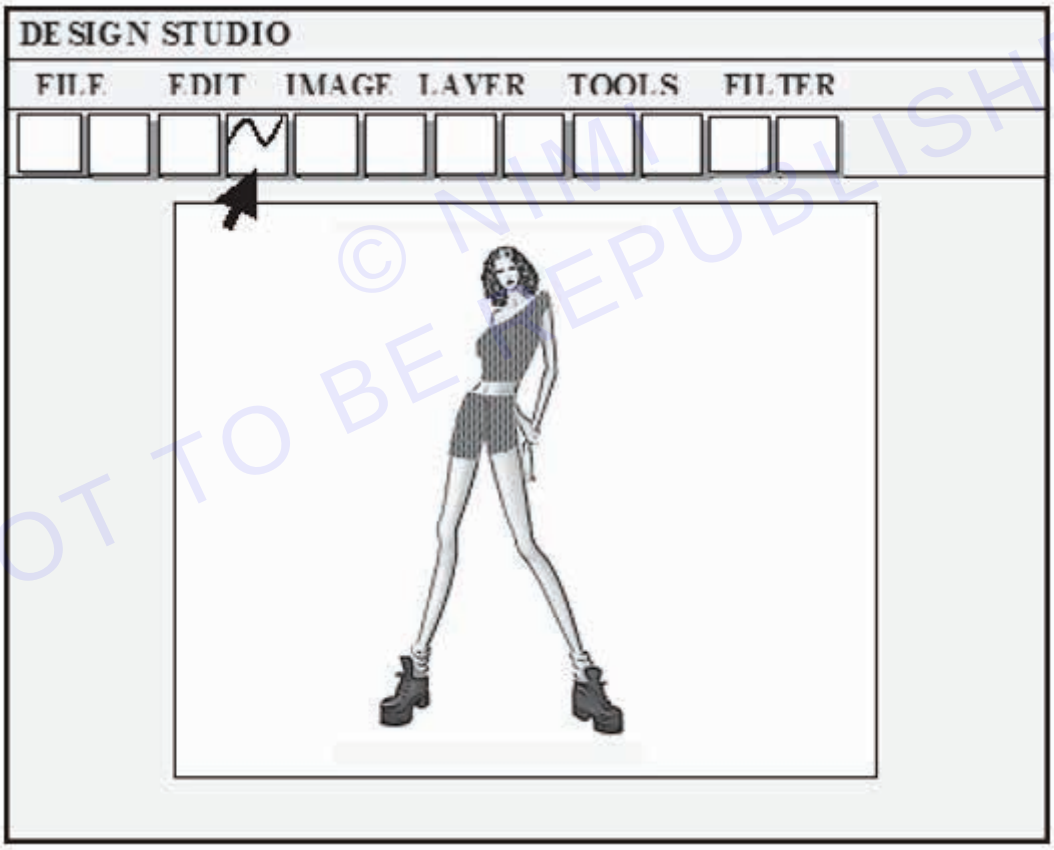
Procedure

TASK 1: **Create a new fabric weave and apply on dress**

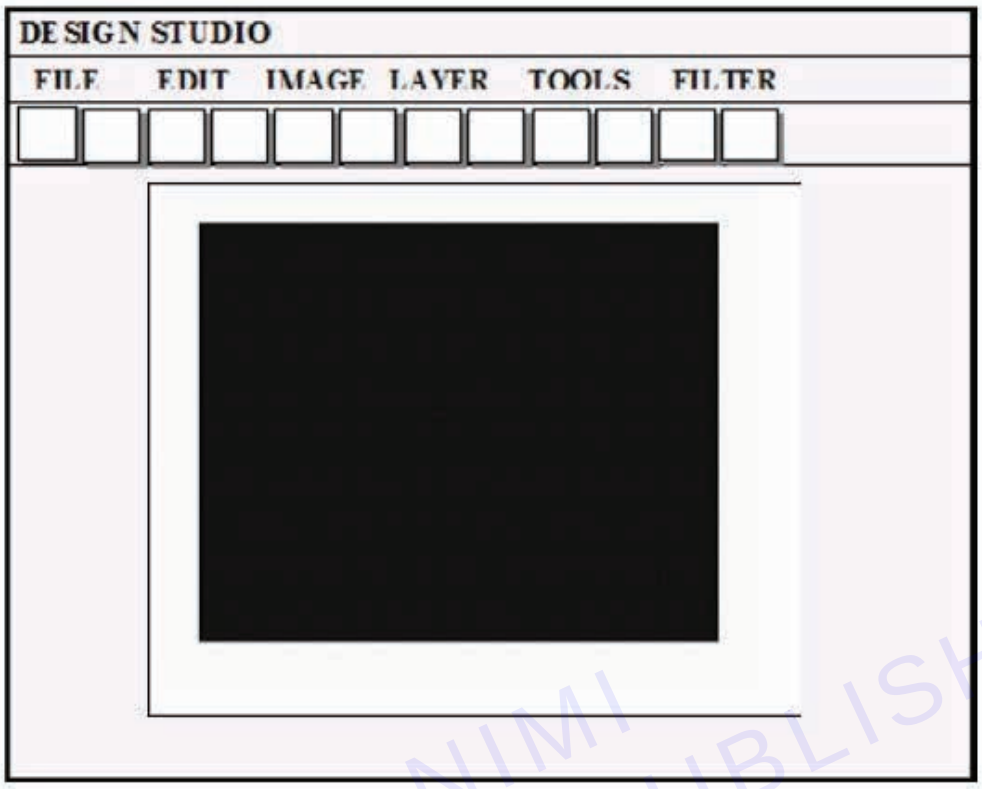
1 Create a new dress to a model and add 3D effect.

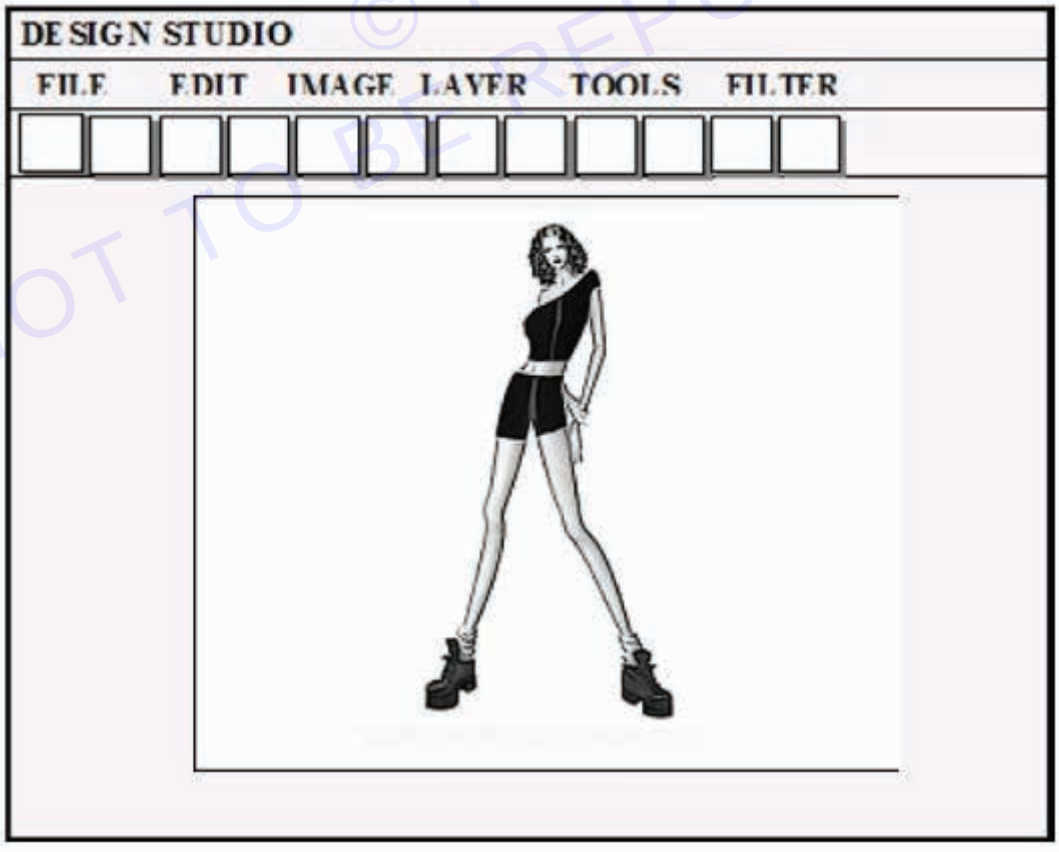
2 Select the curve tool icon.

3 Draw the outline of the garment with the help of curve tool.



4 Go to Filter of menu bar and select a texture variation effect, for example, a leather fabric effect.





Change the tone of the fabric design

Objectives : At the end of this exercise, you will be able to:

- change the tone of the fabric design.

Requirements

Tools/Instruments

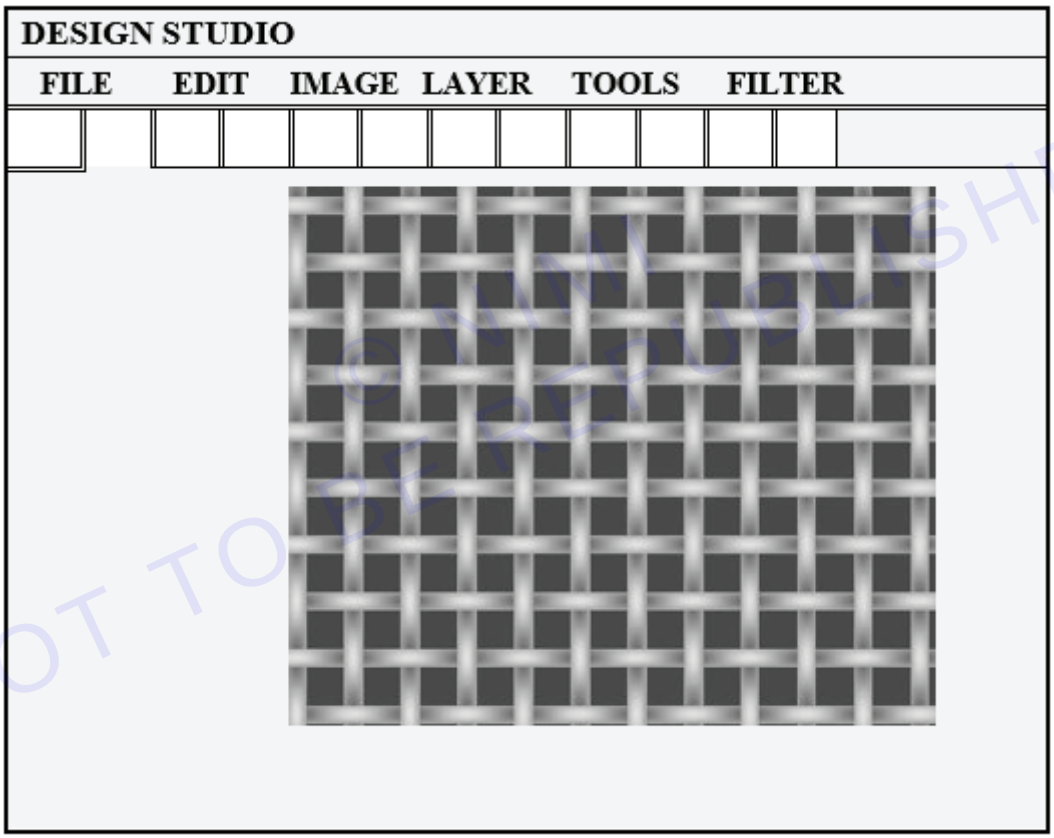
- Computer with suitable Design Studio software - 1 No.

Procedure

TASK 1: **Change the tone of the fabric design**

1 Create a new dress to a model and add 3D effect.

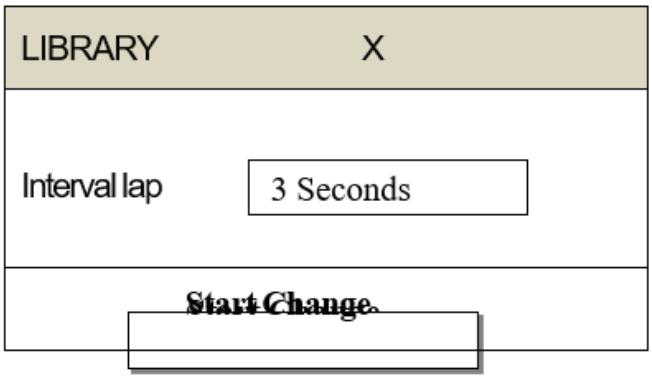
2 Double click on texture to change the color of the texture.



3 Select change tone tool from image of menu bar and select auto-change.

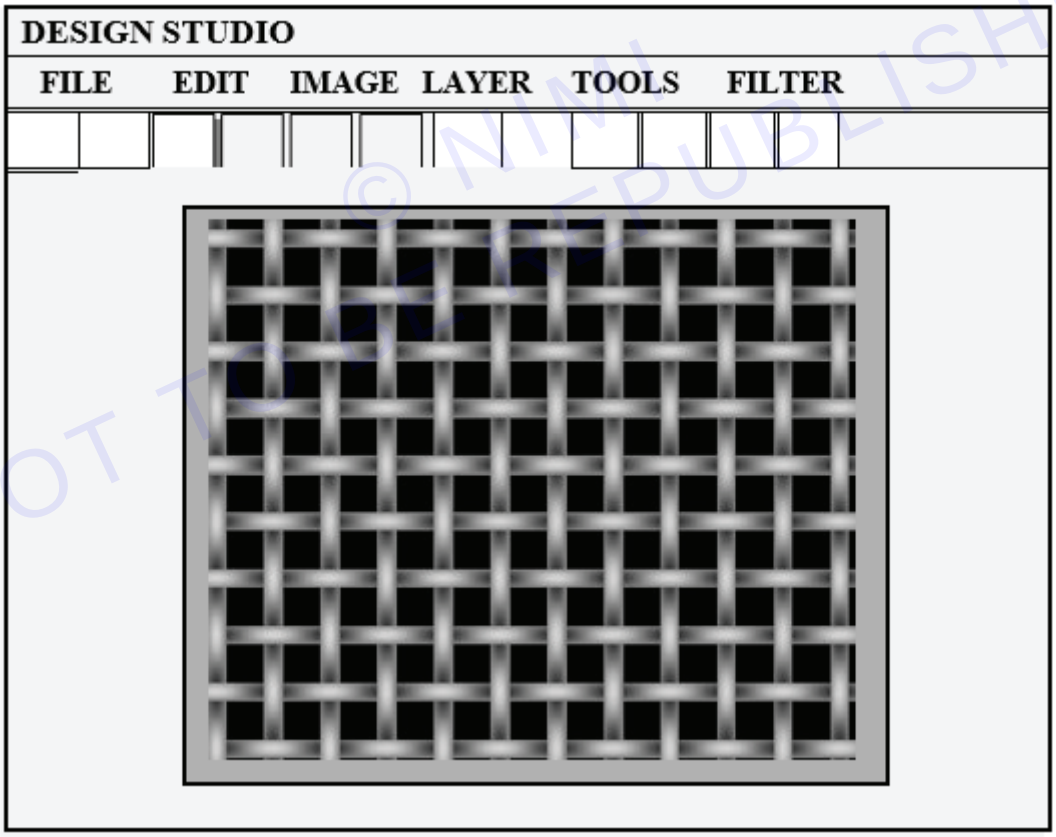
4 Enter interval lap (3 Seconds) in auto change dialog box .

5 Click on start change.



Note: The system automatically generates the RGB color throughout the texture

6 Click auto match to update the color automatically in design studio.



Apply accessories from library material

Objectives : At the end of this exercise, you will be able to:

- apply ear ring
- edit the ear ring.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

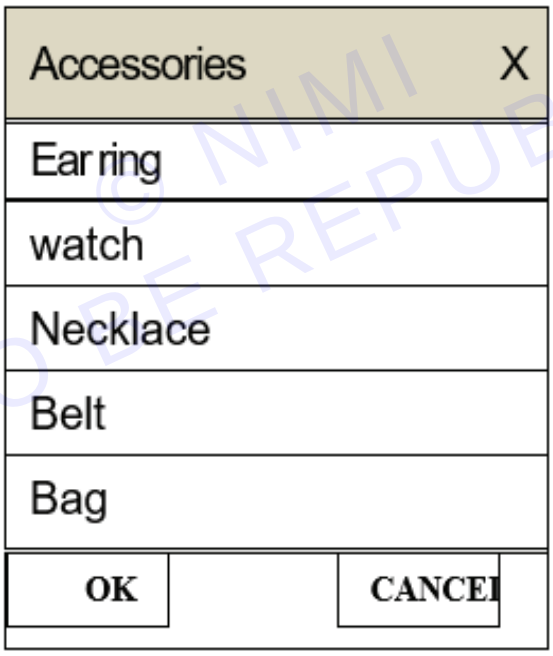
TASK 1: **Apply ear ring to the model**

1 Select a model.

2 Go to image of menu bar.

3 Select Accessories.

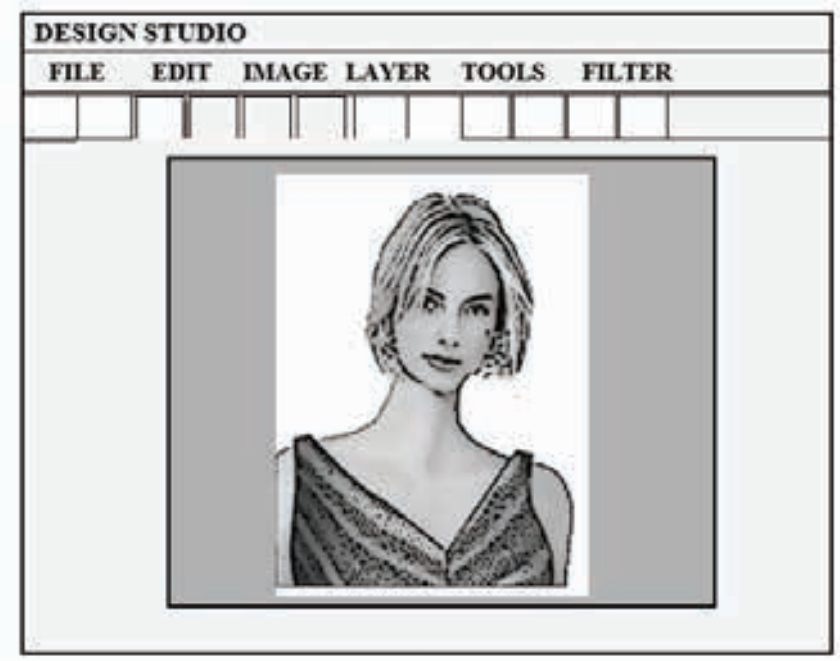
4 Select ear ring from the dialog box.



Note : The system automatically displays the picture of rings in the bottom of the working area.

5 Click OK

6 Click and drag the ring to the ear position. .



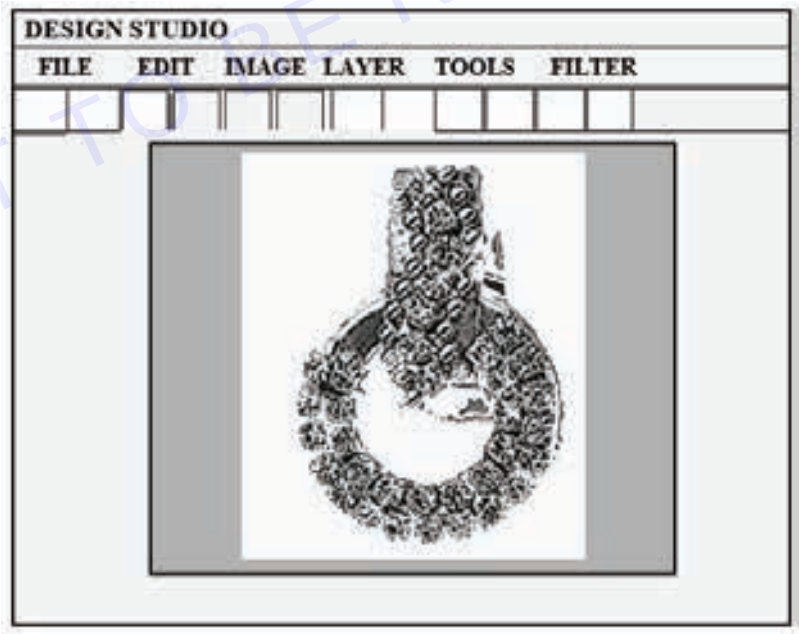
TASK 2 : **Edit the ear ring**

1 Double click on ear ring

2 Click on edit and select inner transparent.

3 Click on the tick mark so that it automatically makes it transparent.

4 Double click on the working area to view the full picture.



Add necklace and belt to the model

Objectives : At the end of this exercise, you will be able to:

- add and edit necklace
- add belt.

Requirements

Tools/Instruments

- Computer with suitable Design Studio software - 1 No.

Procedure

TASK 1: **Add and edit necklace**

1 Create new dress to a model.

2 Go to image of menu bar.

3 Select Accessories.

4 Select necklace from the dialog box

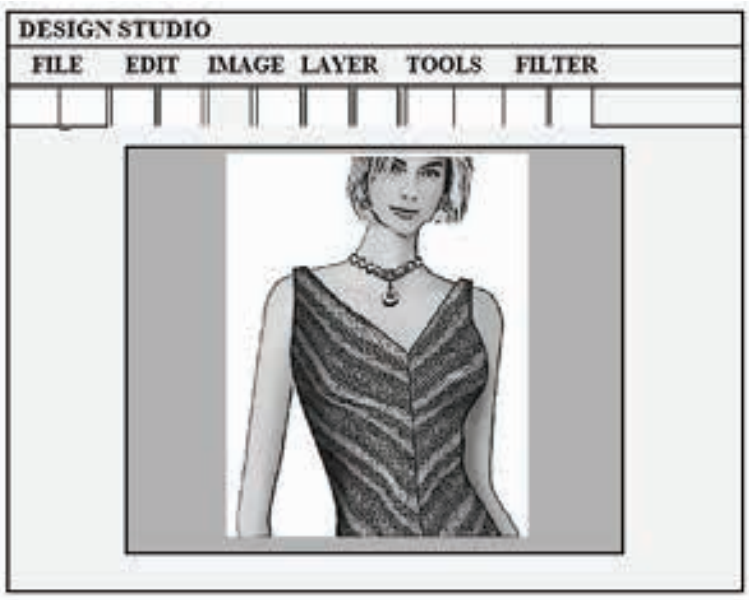
5 Click OK

6 Click and drag the necklace to the position.

7 Double click on necklace

8 Edit the necklace

9 Double click on the working area to view the full picture.



TASK 2 : **Add belt**

1 Follow the same procedure of task 1.

EXERCISE 41 : Practice of Designing

Refer Exercise - 40

MODULE 10 : Develop Patterns from Block for Girls Outfit

EXERCISE 42 : Design And Develop Patterns From Block For Frock Style - 1 Or Tunic Using Variety Of Darts, Gather, Pleats, Tucks, Flare

Objectives

At the end of this exercise you shall be able to

- materials needed, take measurements
- draft the basic block, draft darts.

Requirements

Tools/Materials

- Pencil, eraser, ruler, french curve, measuring tape
- Pattern paper, fabric.

Job Sequence

Designing in the context of fashion involves a multifaceted process that encompasses creativity, research, technical skills, and iterative refinement. Let's demonstrate and review the practice of designing within a fashion studio:

Designing and developing patterns for a frock style or tunic using a variety of darts can add depth and shape to the garment. Here's a step-by-step guide to creating such patterns:

Materials Needed:

1 Pattern paper or any large paper for drafting.

2 Pencil, eraser, ruler, and French curve.

3 Measuring tape.

4 Fabric for making a prototype.

Steps

1 Take Measurements:

- Measure the bust, waist, and hip circumference, as well as the desired length of the frock or tunic.
- Note down these measurements as they will guide you in drafting the pattern.

2 Draft the Basic Block:

- Begin by drafting the basic block pattern for the bodice or the top part of the frock/tunic.
- Use the bust, waist, and hip measurements to draw a basic bodice block pattern with front and back pieces.

3 Decide on Dart Placement:

- Decide on the placement and type of darts you want to incorporate into your design.
- Common dart types include waist darts, bust darts, shoulder darts, and neckline darts.

4 Draft Darts:

- Draw the chosen darts on the front and back bodice pattern pieces.

- Experiment with different dart placements and angles to achieve the desired shape and fit.
- Ensure that the total amount of fabric taken in by the darts equals the total needed reduction in the garment's circumference.

5 Create Style Lines:

- Experiment with adding style lines to the pattern to enhance the design.
- You can incorporate princess seams, yokes, or other design features using the dart lines as a guide.

6 Add Seam Allowance:

- Once you're satisfied with the dart placements and style lines, add seam allowances to all pattern pieces.
- Typically, a 1/2 inch to 5/8 inch seam allowance is added around all edges.

7 Cut Out and Sew Prototype:

- Cut out the pattern pieces from fabric based on your drafted pattern.
- Sew the prototype together, leaving the edges unfinished for fitting purposes.

8 Fit and Adjust:

- Try on the prototype to assess the fit and look.
- Make any necessary adjustments to the dart placements, seam lines, or overall shape.

9 Finalize Pattern:

- Transfer any adjustments made during the fitting onto the pattern.
- Finalize the pattern by smoothing out curves, truing seam lines, and labeling pieces.

10 Make Additional Variations:

- Once you have a well-fitting pattern, experiment with different fabric choices, lengths, sleeve options, and embellishments to create various frock styles or tunics.

Additional Tips:

- Take your time during the drafting process to ensure accuracy.
- Use muslin or inexpensive fabric for the prototype to avoid wasting expensive materials.
- Don't hesitate to experiment with dart placements and style lines to achieve the desired look and fit.
- Keep notes of your pattern adjustments for future reference.

By following these steps and experimenting with different dart placements and style lines, you can design and develop patterns for frock style or tunic garments with unique and flattering shapes. Designing and developing patterns that incorporate gathers, pleats, tucks, and flare can result in garments with interesting textures, shapes, and volume. Here's how you can create patterns using these design elements:

Materials Needed

1 Pattern paper or any large paper for drafting.

2 Pencil, eraser, ruler, and French curve.

3 Measuring tape.

4 Fabric for making a prototype.

Steps:

1 Take Measurements

- Take accurate measurements of the wearer's body or the mannequin if the garment is not custom-made. Measure bust, waist, hip circumference, and desired length.

2 Draft the Basic Block

- Start by drafting a basic block pattern for the garment you intend to create (e.g., top, dress, skirt).
- Use the bust, waist, hip measurements to draft the basic block.

3 Decide on Design Elements

- Determine where you want to incorporate gathers, pleats, tucks, and flare into the design.
- Sketch out your design ideas on the drafted basic block, marking areas for each design element.

4 Draft Gathered Sections

- For gathers, mark the areas where you want the fabric to be gathered.
- Add extra width to these sections while drafting the pattern. You can do this by extending the pattern piece or adding slashing and spreading lines.

5 Draft Pleats

- Decide on the type and direction of pleats you want to incorporate (e.g., box pleats, knife pleats).
- Mark the pleat placement on the pattern and determine the width and depth of each pleat.
- Add extra fabric to accommodate the pleats in the pattern.

6 Draft Tucks

- Determine where you want to place tucks in the design.
- Mark the tuck lines on the pattern, indicating the width and spacing of each tuck.
- Adjust the pattern to include the additional fabric needed for the tucks.

7 Draft Flare

- Decide where you want to add flare to the garment (e.g., hemline, sleeves).
- Gradually widen the pattern from the desired flare point to create a flared silhouette.
- You can also add flare by slashing and spreading the pattern pieces.

8 Add Seam Allowance

- Once you've incorporated all design elements into the pattern, add seam allowances to all pattern pieces.
- Typically, a 1/2 inch to 5/8 inch seam allowance is added around all edges.

9 Cut Out and Sew Prototype

- Cut out the pattern pieces from fabric based on your drafted pattern.
- Sew the prototype together, leaving the edges unfinished for fitting purposes.

10 Fit and Adjust

- Try on the prototype to assess the fit and look.
- Make any necessary adjustments to the gather, pleat, tuck, and flare placements, as well as the overall fit.

11 Finalize Pattern

- Transfer any adjustments made during the fitting onto the pattern.
- Finalize the pattern by smoothing out curves, truing seam lines, and labeling pieces.

12 Make Additional Variations

- Experiment with different fabric choices, lengths, and embellishments to create various versions of the garment.

Additional Tips

- Practice on scrap fabric or muslin before cutting into your final fabric.
- Keep in mind the fabric's drape and weight when incorporating design elements like gathers, pleats, tucks, and flare.
- Take your time and be creative with your design. These elements can add depth and visual interest to your garments.

By following these steps, you can design and develop patterns that incorporate gathers, pleats, tucks, and flare to create unique and stylish garments.

Designing and developing patterns that incorporate gathers, pleats, tucks, and flare can add interesting texture, volume, and visual appeal to garments. Below are the steps to create such patterns.

Materials Needed

1 Pattern paper or any large paper for drafting.

2 Pencil, eraser, ruler, and French curve.

3 Measuring tape.

4 Fabric for making a prototype.

Steps

1 Take Measurements

- Measure the wearer's body or the intended measurements for the garment.
- Note down measurements such as bust, waist, hip circumference, and desired garment length.

2 Draft the Basic Block

- Begin by drafting the basic block pattern for the garment's bodice or top part.
- Use the bust, waist, and hip measurements to draw a basic bodice block pattern with front and back pieces.

3 Decide on Design Elements

- Determine where you want to incorporate gathers, pleats, tucks, and flare into your design.
- Consider the placement, size, and direction of these elements to achieve the desired look.

4 Draft Gathers

- To create gathers, mark areas on the pattern where you want the fabric to be gathered.
- Extend these areas beyond the original pattern, adding extra width to accommodate the gathers.
- Draw gathering lines parallel to the grainline, evenly spaced, within these marked areas.

5 Draft Pleats:

- Decide on the type of pleats you want to incorporate, such as box pleats, knife pleats, or inverted pleats.
- Mark the width and depth of each pleat on the pattern, ensuring they are evenly spaced and aligned.

6 Draft Tucks:

- Determine the placement and size of tucks on the pattern.
- Mark the width and depth of each tuck, ensuring they are evenly spaced and aligned.

7 Draft Flare:

- Decide where you want to add flare to the garment, such as at the hemline or sleeves.
- Gradually increase the width of the pattern pieces from the waist down to create flare.

8 Add Seam Allowance:

- Once you're satisfied with the design elements, add seam allowances to all pattern pieces.
- Typically, a 1/2 inch to 5/8 inch seam allowance is added around all edges.

9 Cut Out and Sew Prototype:

- Cut out the pattern pieces from fabric based on your drafted pattern.
- Sew the prototype together, leaving the edges unfinished for fitting purposes.

10 Fit and Adjust:

- Try on the prototype to assess the fit and look.
- Make any necessary adjustments to the gathers, pleats, tucks, flare, or overall shape.

11 Finalize Pattern

- Transfer any adjustments made during the fitting onto the pattern.
- Finalize the pattern by smoothing out curves, truing seam lines, and labeling pieces.

12 Make Additional Variations:

- Once you have a well-fitting pattern, experiment with different fabric choices, lengths, sleeve options, and embellishments to create various garment styles.

Additional Tips

- Experiment with the density and spacing of gathers, pleats, and tucks to achieve different effects.
- Keep in mind the drape and weight of the fabric when incorporating flare into the design.
- Take your time during the drafting process to ensure accuracy and balance in the design elements.
- Consider how the design elements will interact with each other and with the wearer's body for both aesthetic and functional purposes.

By following these steps and experimenting with different design elements, you can create patterns for garments with gathers, pleats, tucks, and flare that are unique and visually striking.

EXERCISE 43 : Develop patterns from block form girls outfit

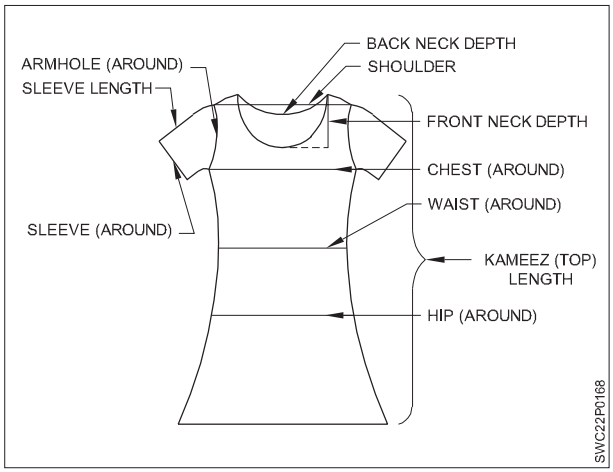
Objectives

At the end of this exercise, you will be able to:

- draft a ladies kameez
- lay and cut ladies kameez
- stitch the ladies kameez.

Procedure

TASK 1: **Take measurement**



TASK 2: **Take measurement**

Measurement in cm

Full Length	-	102 cm
Breast	-	90 cm
Across Back	-	35 cm
Waist	-	68 cm
Sleeve Length	-	38 cm
Sleeve bottom	-	26cm

Suitable Material

Cotton, Poplin, Silk, Georgette, Chiffon, Crape

Required material = 2.6mts of 90 cm width fabric

Construction for Front :

0 - 1	= Full length of kameez + 3 cm for seam	= 105 cm
0 - 2	= 1/4 of breast - 2.5 cm	= 20cm
draw the square out line		
2 - 3	= 1/6 of breast + 2.5	= 17.5 cm
Draw the square out line		
0 - 4	= 1/2 of across back + 1 cm for seam	= 18.5 cm
5	= is square from 2&4	
0 - 6	= 1/12 of breast	= 7.5 cm
0 - 7	= 1/8 of breast	= 11.5 cm
4 - 8	= 2cm	
Draw the neck shape from 7 -6 and join 8 -6		
5 - 9	= 2.5 cm	
2 - 10	= 1/4 of breast + 4 cm draw the arm hole shape	= 26.5 cm
Draw the front armhole shape 10 - 9 - 8		
3 - 11	= 1/4 of waist + 5 cm	= 22 cm
1 - 12	= 1/4 of breast + 15 cm	= 37.5 cm

Side open:

12 - 13	= for side open(1/3 of breast)	

Back:

0 - 14	= 1/12 of breast	=7.5 cm
15	= is midway of 5 - 8	

Draw the back armhole shape 10 – 15,8 inlay for 2.5 cm

Neck open:

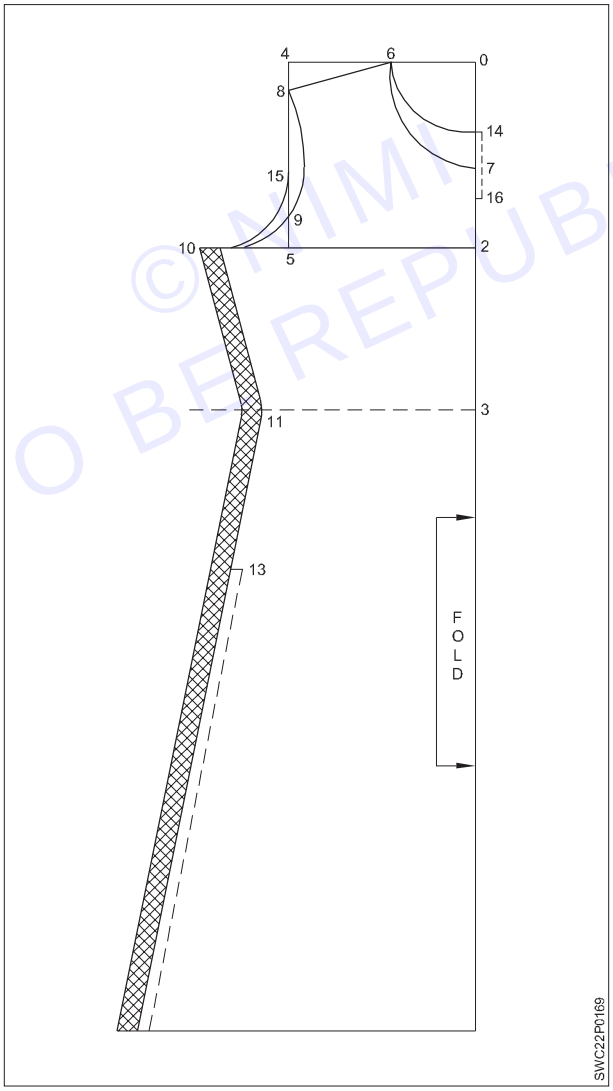
14 - 16	= 1/12 of breast for neck open	= 7.5 cm

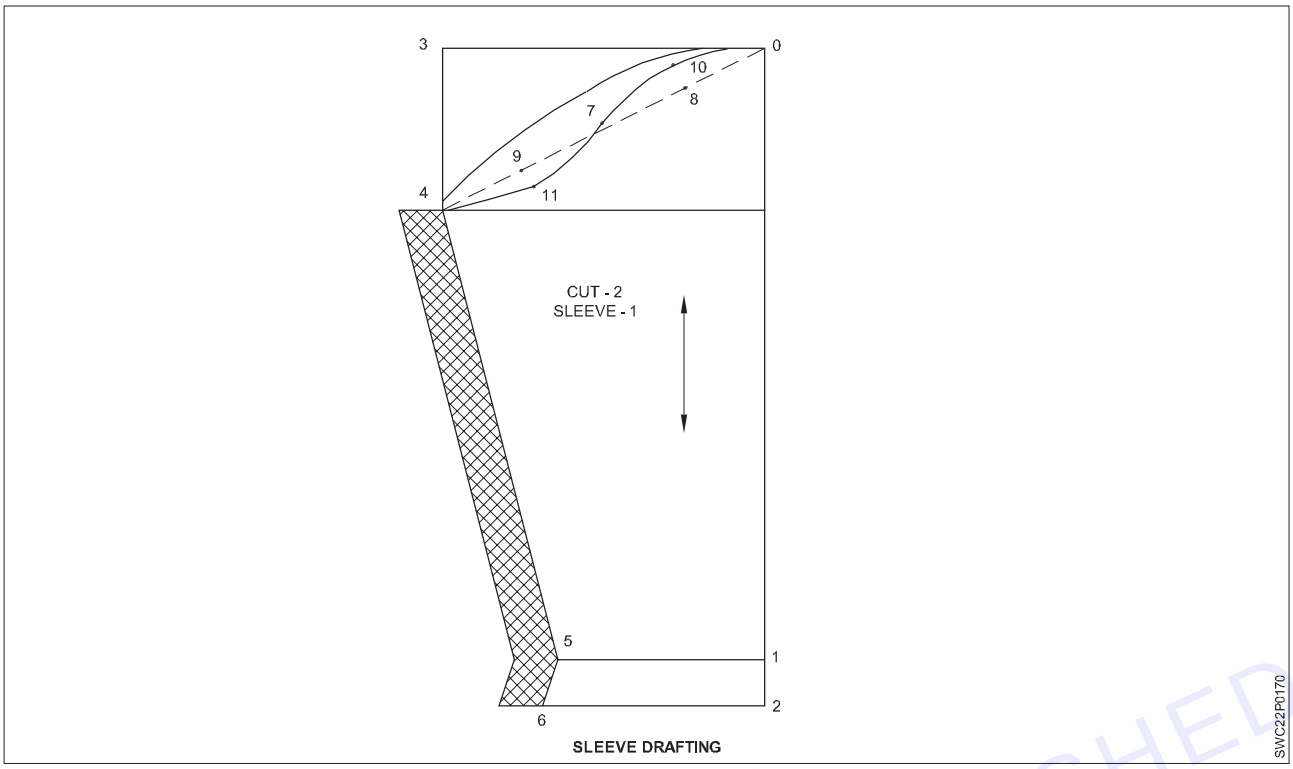
Inlay

Inlay	= 2.5 cm for inlay

Sleeve :

0 – 1	= Sleeve length + 1 cm	= 38cm
1 – 2	= 3 cm for bottom fold	= 3 cm
0 – 3	= 1/12 of breast + 2.5 cm	= 10 cm
3 – 4	= 0 – 3 front measure (1/4 of Breast – 2.5cm)	
1 – 5	= 1/2 of sleeve bottom	
2 – 6	= 1 – 5 measure + 1 cm join 0 – 4 – 5 – 6	
7	= is midway of 0 – 4	
8	= is midway of 0 – 7	
9	= is midway of 4 – 7	
8 – 10	= 9 – 11	= 1.5 cm
0 – 10 – 9 – 4	= 0 – 10 – 7 -11 -4 Draw the shape as per the diagram	
Inlay	= 2.5 cm for inlay	





SLEEVE DRAFTING

TASK 3 : **Prepare Master pattern**

1 Cut the paper pattern and add seam allowance and turning to it for master pattern.

2 Mark all the notches, seamline, cutting line etc.

3 Name all the cut components and mark the grainline, foldline etc.

4 Finally cut the master pattern.

TASK 4 : **Lay and cut a ladies kameez**

1 Lay the fabric on the cutting table with their wrong side facing upwards.

2 Arrange the master pattern of shorts in such a way that fabric utilization is less.

3 Mark the outline of all the kameez components using a marking chalk.

4 Mark the slit open position on the fabric.

5 Remove the master pattern.

6 Cut the fabric on the outline marked.

7 Cut notches and slit markings.

8 Tie all the layers of components together.

TASK 5 : **Stitch the ladies kameez**

1 Join the shoulder of both the front and back part of kameez.

2 Finish the neck with facing.

3 Stitch front and back side together leaving slit opening on both sides.

4 Fold and stitch the slit open from bottom to slit mark, let the needle be in the fabric and now lift the pressure foot and turn the fabric and fold the other side of slit open and stitch it.

5 Trim the edges of side seam with pinking scissor or give over lock stitch.

6 Finish the slit and fold the bottom by double row of stitches for neat finish.

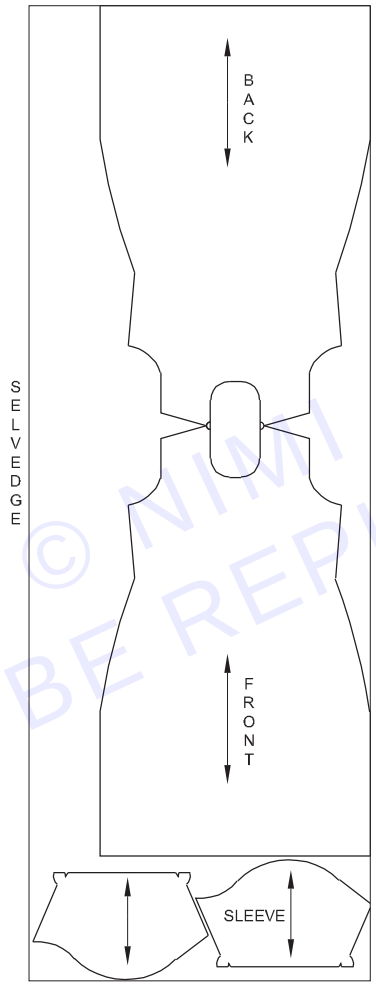
7 Fold the sleeve bottom and stitch it.

8 Stitch the side seam of sleeve and trim the edges with pinking scissors or give over lock stitch.

9 Set the sleeves in armhole.

10 Trim excess threads.

11 Finish and press.



CUT COMPONENTS

FRONT	1
BACK	1
SLEEVES	2

SWC22P0171

Practice different neck design

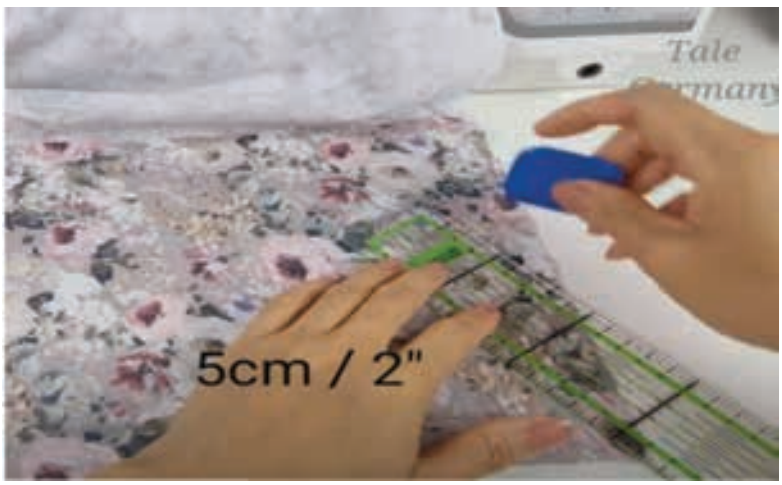
Skill - Attach Neckline Facing

Take fabric for facing same as the kameez material.

Keep the bodice part of kameez on the facing fabric and align the centre front fold.

Mark the round neck shape with a marking chalk.

Mark the width of the facing also.

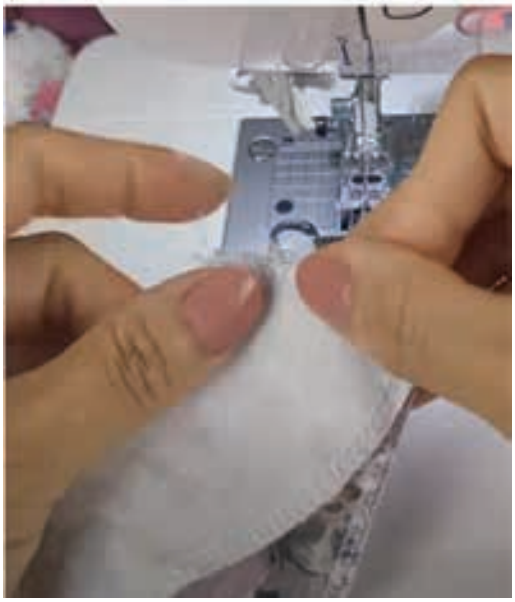


Cut the facing piece as required

Cut and Iron the interfacing as per the shape of the facing fabric piece.

Stitch the shoulder seam by joining both front and back part.

Join both the front and back facing together.

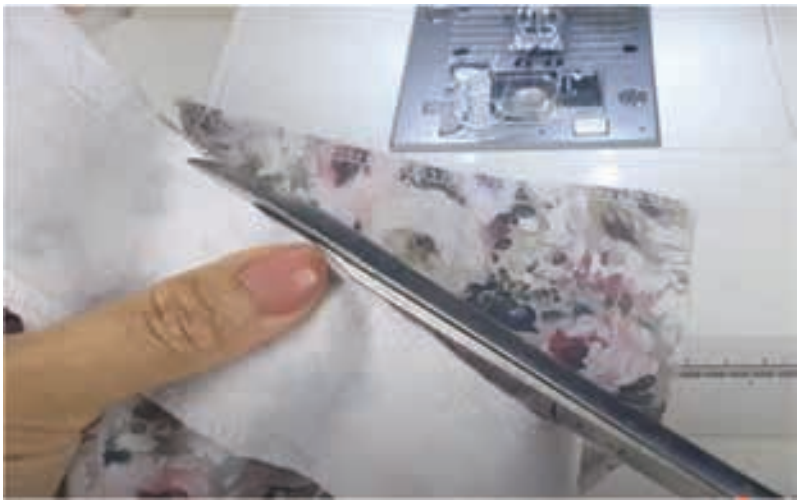


Press open the seam

Attach the neck facing to the neck line

Stitch the facing for both front neck and back neck

Trim the excess seam allowance and give clipping



Now turn to the right side and put topstitch.

Overlock the bottom hem of the facing. Put stay stich at the shoulder, for the facing to lay flat on the shoulder.

Belted Salwar

Objectives : At the end of this exercise, you will be able to:

- draft and cut a salwar
- sew a salwar

Procedure

TASK 1: **Take measurement**

Measurements

Full Length = 100 cm

Hip = 100 cm

Bottom = 38 cm

Components

Center Panel - 2 Piece

Side panel - 4 Piece

Belt - 2 Piece

Suitable Material

Cotton

Silk

poplin

Printed Poplin

Crape

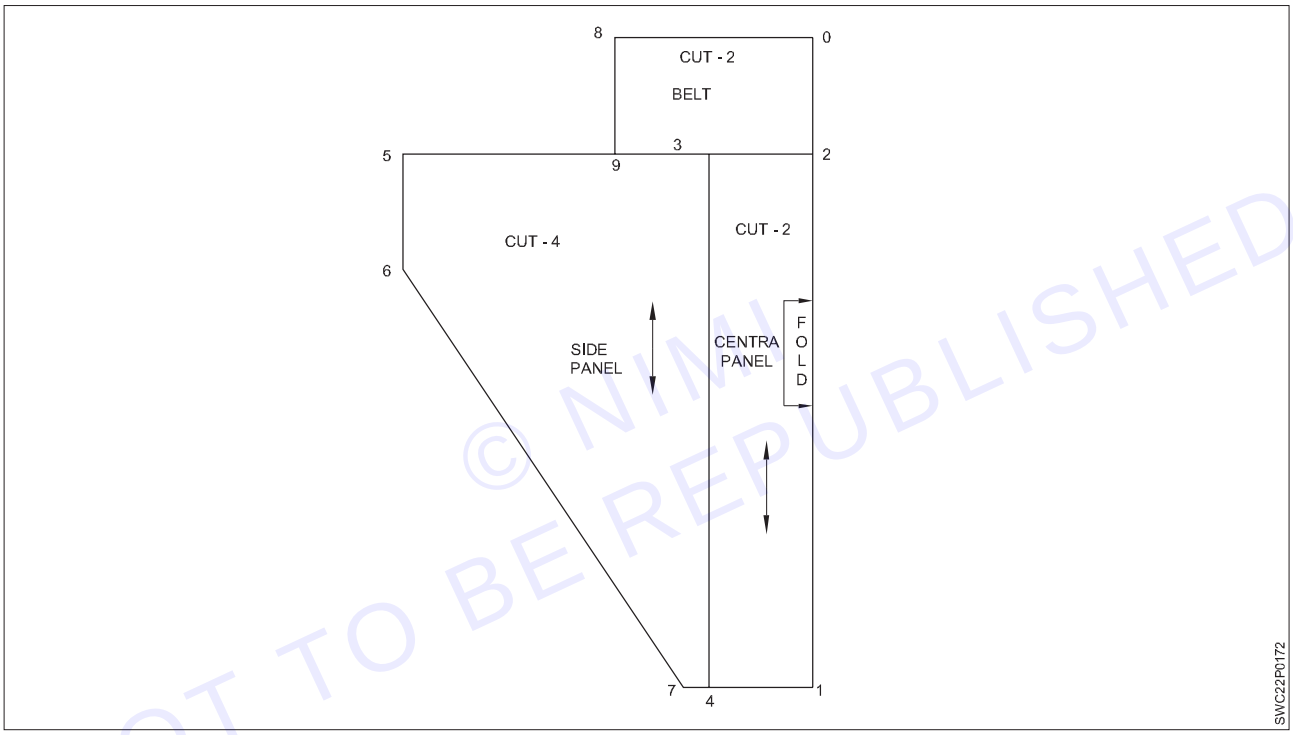
Required Material

3 meters fabric of 90cm width.

TASK 2: **Draft Salwar**

Construction

0 – 1	=	Full Length	= 100 cm
0 – 2	=	H/4 – 5 cm Square out from 1 and 2	= 20 cm
2 – 3	=	1- 4 = H/6	= 16.6 cm
3 – 5	=	Width of cloth /2 - 2 cm square down from 5	
5 – 6	=	[H/3 + 5] –belt (0 – 2)	= 18.5cm
1 – 7	=	Bottom /2 join 6 – 7	= 19 cm
0 – 8	=	2-9 = (H +8) /4cm	=27cm
2 – 10	=	1/2 of 2 – 9 marks for gathering in front	



TASK 3 : **Prepare Master pattern**

1 Cut the paper pattern and add seam allowance and turning to it for master pattern.

2 Mark all the notches, seamline, cutting line etc.

3 Name all the cut components and mark the grainline, foldling etc.

4 Finally cut the master pattern.

TASK 4 : **Lay and cut the salwar**

1 Lay the fabric on the cutting table on width wise folding with wrong side facing up.

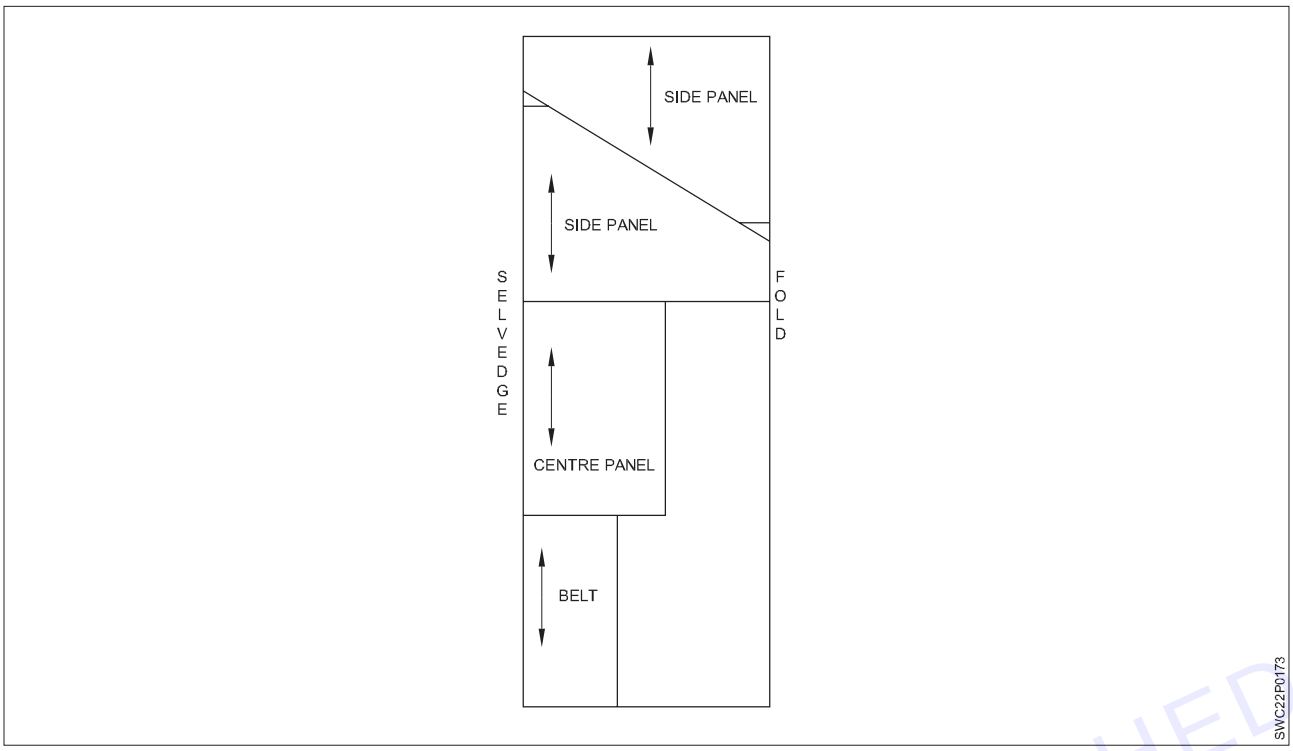
2 Arrange the master pattern of salwar width waist band economically without wasting the fabric.

3 Mark the outline of salwar with waist band components with marking chalk.

4 Remove the master pattern.

5 Cut along the marking line with sharp shears.

6 Pin all the layers of components together for stitching



TASK 5 : **Sew a salwar**

1 Keep the sewing machine ready for sewing by winding the bobbin and threading the machine.
2 Join straight sides of side panels with centre panel for both leg parts.
3 Make bottom cuff with stiffening.
4 Match centre front and centre back of leg piece.
5 Join crotch by double seam.
6 Take the belt piece and sew the short ends to form a loop
7 Attaching the Belt to the Salwar by aligning the center of the belt with the center of the salwar's waist.
8 Pin the belt to the top edge of the salwar.
9 Sew the belt to the salwar, leaving a small opening for inserting elastic or a drawstring.
10 Adjust the width of leg piece with belt piece by gathering the fabric between the marks.
11 Stitch with double seam.
12 Repeat the process for other leg.
13 Stitch inside leg lengths.
14 Finish by making fold-down casing at top of belt.
15 Insert a drawstring through the waistband. Adjust the fit by gathering the fabric at the waist.
16 Trim the extra threads and Press the garment.

EXERCISE 44 : Design and develop patterns from block for designer girls Skirt & Top using designing with fullness at different areas

Objectives

At the end of this exercise you shall be able to

- measurement, design
- drafting the pattern.

Requirements

Tools/Materials

- Drafting paper, measuring tape, ruler, pencil, seissors, fabric.

Procedure

Creating patterns for a designer girl's skirt and top involves considering various factors such as fabric choice, desired style, and the individual's measurements. Here's a basic guide to designing and developing patterns for a skirt and top with fullness at different areas:

Skirt Pattern

1 **Measurements:** Take accurate measurements of the waist, hips, and desired length of the skirt.

2 **Design:** Decide on the style of the skirt. For example, you could opt for a gathered skirt, a pleated skirt, or a circle skirt.

3 **Drafting the Pattern:**

- **For a gathered skirt**:
  - Determine the desired fullness. You can distribute this fullness evenly around the waist or concentrate it at the front or back.
  - Draft a basic rectangular pattern for the skirt waistband, with the width matching the waist measurement plus seam allowance, and the length based on the desired height of the waistband.
  - Draft the skirt panels by extending the waistband width to the desired hemline length. These panels can be rectangular or slightly tapered towards the waist for a better fit.
  - Add seam allowances to all edges.
- **For a pleated skirt**
  - Decide on the number and width of the pleats. Typically, pleats are evenly spaced around the waist.
  - Draft a basic rectangular pattern for the waistband as with the gathered skirt.
  - Calculate the width of each pleat and mark them on the skirt panels.
  - Add seam allowances to all edges.
- **For a circle skirt**
  - Determine the radius of the waist opening (based on waist measurement) and the desired length of the skirt.
  - Draft a quarter circle pattern using these measurements. You may need to divide the quarter circle into several panels depending on the fabric width and desired fullness.
  - Add seam allowances to all edges.

Top Pattern

1 **Measurements**: Take accurate measurements of the bust, waist, and desired length of the top.

2 **Design**: Decide on the style of the top. For example, you could opt for a fitted bodice with a flared peplum, a blouse with gathers or pleats at the neckline, or a boxy crop top with gathers at the hem.

3 **Drafting the Pattern**

- For a fitted bodice with a flared peplum:
- Draft a basic bodice pattern with darts at the bust for shaping.
- Decide on the length and fullness of the peplum. You can create a flared peplum by gradually widening the pattern from the waist down.
- Add seam allowances to all edges.
- For a blouse with gathers or pleats:
- Draft a basic bodice pattern without darts.
- Determine the desired fullness at the neckline. You can achieve this by adding extra width to the front bodice pattern or by incorporating gathers or pleats.
- Add seam allowances to all edges.
- For a boxy crop top with gathers at the hem:
- Draft a basic rectangular pattern for the bodice, with the width matching the bust measurement plus ease and the length based on the desired crop top length.
- Decide on the amount of fullness you want at the hem. You can achieve this by adding extra width to the bottom edge of the pattern and incorporating gathers.
- Add seam allowances to all edges.

Once you have drafted the patterns, you can cut them out from muslin or another inexpensive fabric to create mock-ups and make any necessary adjustments before cutting into your final fabric. Be sure to label each pattern piece and indicate any notches, grainlines, or other important markings. Additionally, consider adding closures such as zippers, buttons, or snaps as needed for the final garments.

Creating patterns for a designer girl's skirt and top with varying fullness at different areas involves a mix of creativity, precision, and understanding of garment construction. Below, I'll outline the process for designing and developing patterns for both the skirt and the top separately.

Skirt Pattern

Materials Needed:

- Pattern paper or drafting paper
- Measuring tape
- Ruler
- Pencil
- Scissors
- Fabric

Steps:

1 **Take Measurements:**

- Waist circumference
- Desired length of the skirt
- Hip circumference (if necessary)
- Desired fullness at different areas (e.g., waist, hips, hem)

2 **Drafting the Skirt Block:**

- Start with a basic skirt block pattern. This will be a simple A-line or straight skirt pattern.
- Draft the front and back skirt blocks separately based on the measurements taken. Ensure to include seam allowances.
- For fullness, decide which areas you want to add volume. Typically, this could be at the waist, hips, or hem.

3 **Adding Fullness:**

- To add fullness at the waist, you can create gathers or pleats.
- At the hips, you might add flares or gores to the skirt panels.
- For a fuller hem, you can add a ruffle or godets.

4 **Creating Pattern Pieces:**
- Once you've decided on the style and placement of fullness, draft additional pattern pieces accordingly.
- Label each pattern piece for easy assembly.

5 **Test the Pattern:**
- Before cutting the fabric, it's essential to make a mock-up or to test the fit and the look of the skirt.

6 **Finalize and Cut Fabric:**
- After adjustments, use the finalized pattern to cut the fabric for the skirt.

Top Pattern

Materials Needed:

- Pattern paper or drafting paper
- Measuring tape
- Ruler
- Pencil
- Scissors
- Fabric

Steps:

1 Take Measurements:
- Bust circumference
- Waist circumference
- Desired length of the top
- Shoulder width
- Armhole circumference

2 **Drafting the Top Block:**
- Begin with a basic bodice block pattern. This can be adjusted to a blouse or top style.
- Draft the front and back bodice blocks separately based on measurements, including seam allowances.

3 **Determining Fullness:**
- Decide where you want fullness in the top. This could be at the bust, waist, or hem.
- Consider using gathering, pleating, or adding flares to achieve the desired fullness.

4 **Creating Pattern Pieces:**
- Draft additional pattern pieces for any areas where fullness will be added.
- Label each piece accordingly.

5 **Test the Pattern:**
- Make a mock-up or the top to check fit and style lines.

6 **Finalize and Cut Fabric:**
- After adjustments, use the finalized pattern to cut the fabric for the top.

Additional Tips

- Always add seam allowances to your patterns.
- Test the fit with a mock-up before cutting into your final fabric.
- Keep in mind the fabric's drape and weight when adding fullness.
- Be creative with your designs and don't be afraid to experiment with different styles of fullness.

By following these steps, you can design and develop patterns for a designer girl's skirt and top with varying fullness at different areas. Remember to take your time, be precise, and enjoy the creative process!

Prepare Skirt Patterns in different styles using Manipulation

Objectives : At the end of this exercise, you will be able to:

- prepare patterns for Skirt with yoke
- prepare patterns for six gore skirt
- prepare patterns for pegged skirt.

Requirements

Tools/Instruments

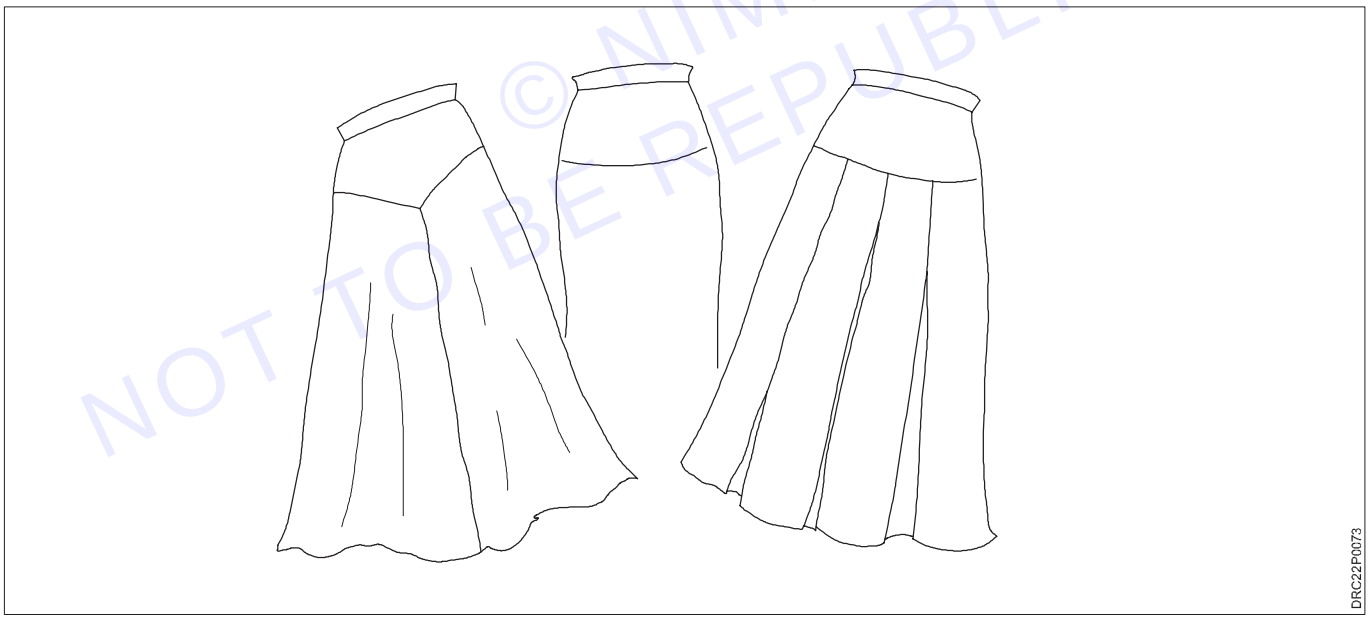
- Measuring tape - 1 No.
- Scissors - 1 No.
- L-Scale ruler - 1 No.
- Ruler paper for patterns - 1 No.
- Pencil or Pen - 1 No.
- Metal weights - 1 No.
- Tracing wheel - 1 No.
- Awl - as reqd.
- Push pins - as reqd.
- Ladies' bodice block front and back pattern size back pattern size - 12 (M-Small)
- Pattern table - 1 No.
- Pattern shears - 1 No.
- Bell pins and push pins - 1 No.

Materials

- Brown papers - as reqd.

Procedure

TASK 1: **Prepare patterns for skirt with yoke (Fig 1)**



Working method

1 Draw the basic skirt block pattern in a paper and do the following alterations for preparing yoke skirt pattern.

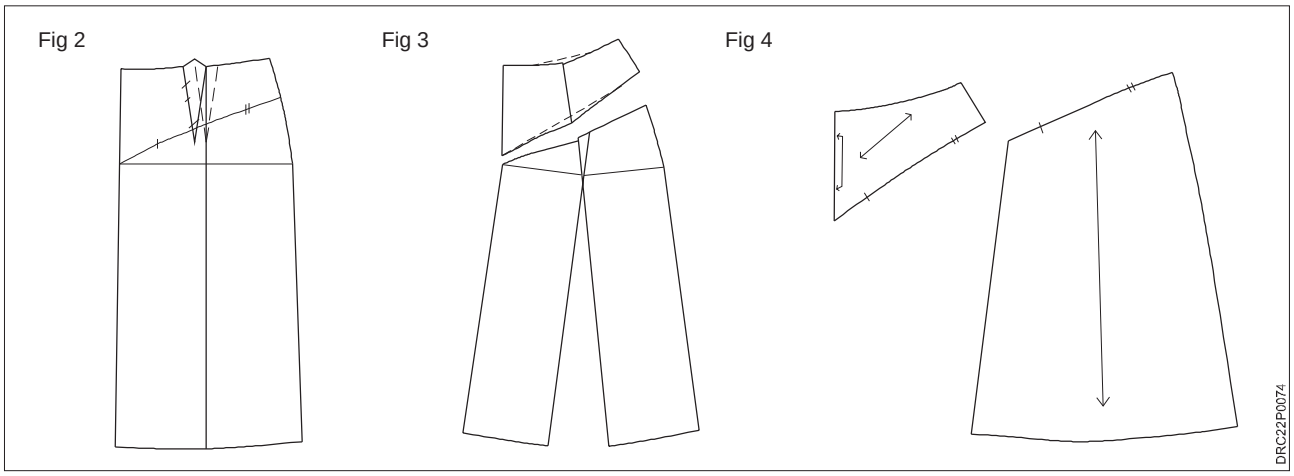
2 Mark the required or measured size of yoke points on the drawn pattern. (Fig 2)

3 Divide in half at hip and hem, draw a vertical line through the marks to the waist and move the dart onto the line. (Fig 2)

4 Slash up the line from hem to dart point. Join the yoke pieces (two) to one (i.e) fold out the dart. The line from the dart to the skirt bottom the width of the skirt bottom. (Fig 3)

5 Redraw yoke and skirt to soften the angles from the dart (Fig 4). Add required seam allow once

Note : The explained pattern is a common yoke skirt pattern, this can be modified to different styles of yoke skirt as shown in the model.



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TASK 2: **Prepare patterns for Six Gore skirt (Fig 1)**

1 Do the following alterations for preparing six-gore skirt. (Fig 1)

2 Trace the front block (Half portion with fold) (Fig 2). Draw a line from dart top to bottom. Mark 2 points 1½" away from the line as shown in the figure.

3 Join the two new points to dart tip point.

4 Trace the middle panel and side panel portion as shown in the Fig 4.

5 Add seam allow once and do the same of back also. (Fig 5)

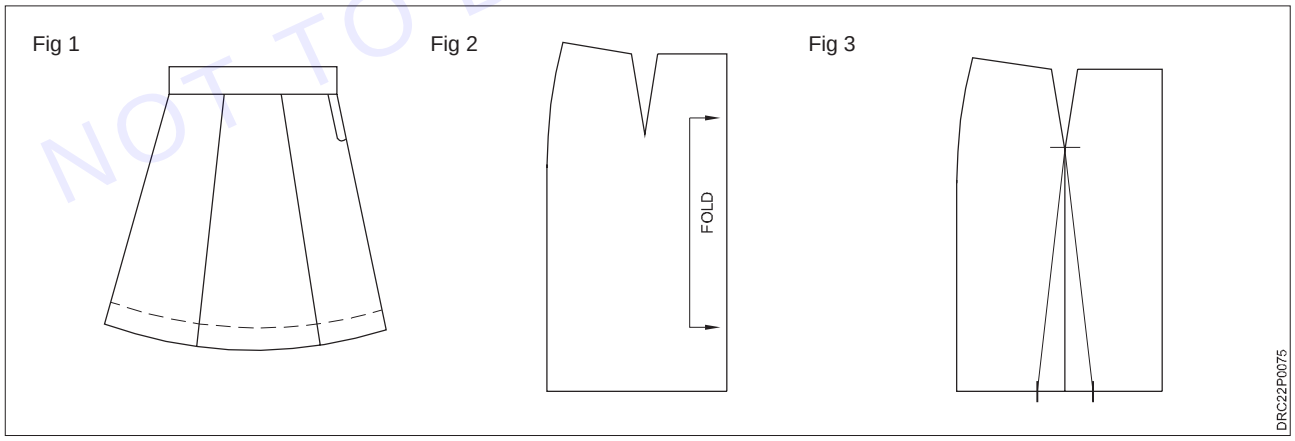


Fig 4

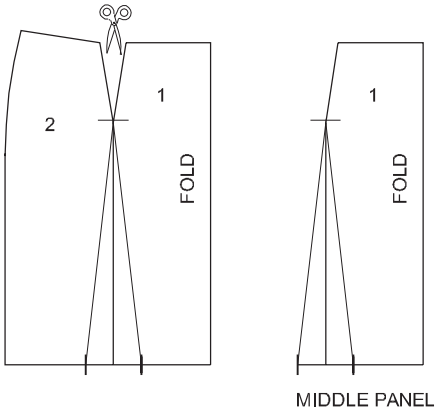
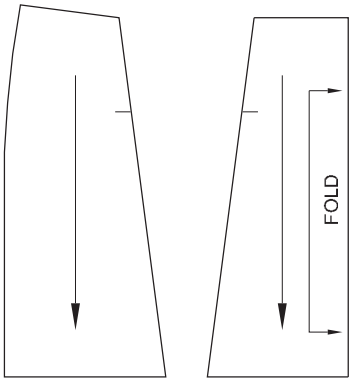


Fig 5



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TASK 3: **Prepare patterns for Pegged skirt (Fig 1)**

1 Outline the basic skirt block front part and narrow at the side seam from hip to bottom. (Fig 2)

2 Draw the curved lines from waist to hip at equal intervals for forming pleats. The curves must be of equal shape.

3 Slash and spread the marked curve lines. (Fig 3)

4 Redraw the pattern, with the newly created waist measurement for pleats (Fig 4)

5 Fold out the pleats while cutting to give shape to waist line.

Fig 1

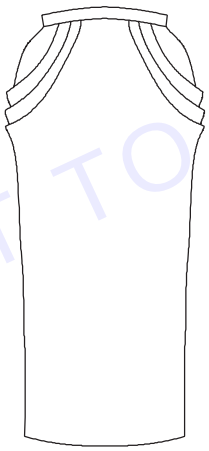

Fig 2

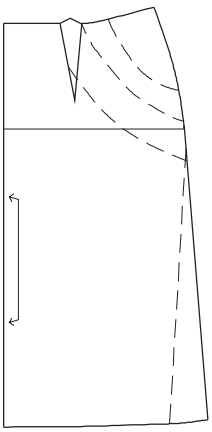

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Fig 3

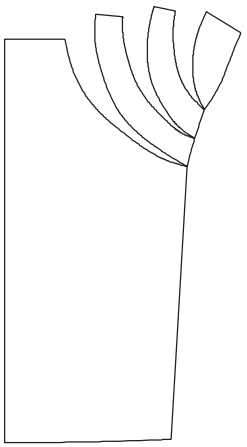
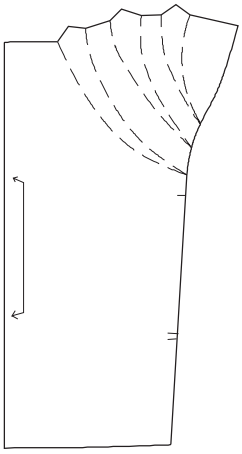


Fig 4



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Note: Get the work checked by your Instructor.

EXERCISE 45 : Design and develop patterns from block for choli cut blouse

Objectives

At the end of this exercise you shall be able to

- take accurate measurement, draft a pattern
- pattern layout, cutting and stitching.

Requirements

Tools/Materials

- Pencil, eraser, french curve, measuring tap, pattern paper, fabric.

Procedure

A Choli Cut Blouses also known as a Bombay Cut Choli, is a traditional Indian blouse style often worn with sarees. It features a short-sleeved, midriff-baring design with a round or V-neckline. Here are the steps to draft and choose:

The Right Fabric

- Select lightweight, breathable fabrics like cotton or silk for a comfortable fit.
- For a more formal look, consider heavier fabrics like silk or brocade.

Take Accurate Measurements

- Measure your bust, waist, and shoulder width.
- Adjust the pattern based on your measurements for a custom fit.

Draft the Pattern:

- Start with a basic blouse block (also known as a sloper).
- Modify the block to create the Choli Cut Blouse shape:
  - Shorten the length to expose the midriff.
  - Adjust the neckline (round or V-neck) according to your preference.
  - Create a fitted silhouette by narrowing the waist and adding darts.
  - Add short sleeves.

4 **Pattern Layout**

- Use A4 size or US Letter size papers to print the pattern.
- Ensure that the pattern pieces are tiled without seam allowances.
- Arrange the pieces according to the layout provided in the pattern.

5 **Cutting and Stitching**

- Cut the fabric pieces following the pattern.
- Stitch the blouse together, paying attention to the neckline, shoulder fit, and sleeve placement.
- Finish the edges with bias binding or facing.

6 **Embellishments (Optional)**

- Choli Cut Blouses can be dressed up with embellishments:
  - Beading
  - Embroidery
  - Lace

Choli Cut Blouse is versatile and can be customized to your style. Whether you're going for a casual or formal look, enjoy creating your unique blouse.

Here's a step-by-step guide on how to cut and stitch a choli blouse:

1 **Measurements and Drafting**

- Begin by taking accurate measurements of your bust, waist, and armhole. These measurements will guide you in creating the blouse pattern.
- Draft the choli blouse pattern on paper. You'll need a front piece, a back piece, and sleeve patterns.

2 **Cutting the Fabric**

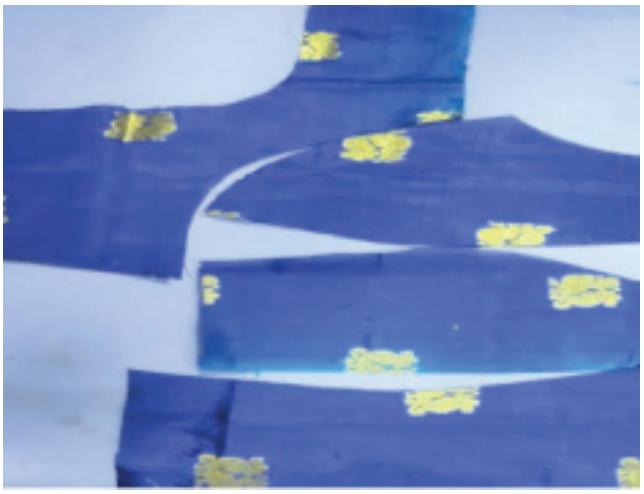
- Place the fabric (usually silk, cotton, or other suitable material) on a flat surface.
- Cut the front and back pieces according to your pattern, ensuring seam allowances are included.
- Cut the sleeve pieces as well.

3 **Stitching the Blouse**

- Sew the front and back pieces together at the shoulders, right sides facing each other.
- Attach the sleeves to the armholes, matching the curves.
- Sew the side seams from the bottom hem to the underarm.
- Finish the neckline and armhole edges with bias binding or facing.
- Add darts if needed for a better fit.

4 **Finishing Touches**

- Hem the bottom edge of the blouse.
- Attach hooks and eyes or buttons at the back for closure.
- Embellish the blouse with embroidery, sequins, or other decorative elements if desired.



Design and develop pattern from block for choli cut blouse

1 Center Back Length (CBN):

- Definition: The measurement from the center of the back neckline to the bottom edge of the garment.
- Purpose: Determines the length of the blouse or top from the back, ensuring a comfortable fit and appropriate coverage.

2 Shoulder Length:

- Definition: The distance from one shoulder point to the other across the back.
- Purpose: Helps in positioning the shoulder seams correctly for a well-fitting garment.

3 Neckline:

- Definition: The shape and height of the opening around the neck.
- Purpose: The neckline design affects the overall style and comfort of the garment. Common necklines include round, V-neck, boat neck, and sweetheart.

4 Chest Arc:

- Definition: The circumference of the chest or bust area.
- Purpose: Determines the fit around the bust. Essential for creating a well-fitting bodice.

5 Armhole (Armhole Circumference):

- Definition: The measurement around the armhole opening.
- Purpose: Ensures ease of movement and comfort for the arms. Proper armhole placement is crucial for sleeve attachment.

6 Waist Arc:

- Definition: The circumference around the waist area.
- Purpose: Determines the fit at the waistline. Essential for skirts, dresses, and fitted tops.

7 Side Seam:

- Definition: The seam that runs vertically from the underarm to the hem along the side of the garment.
- Purpose: Joins the front and back panels, shaping the garment to the body.

Remember, accurate measurements and understanding these terms are essential for creating well-fitting garments. Whether you're designing a choli cut blouse or any other attire, mastering these basics will enhance your dressmaking skills!

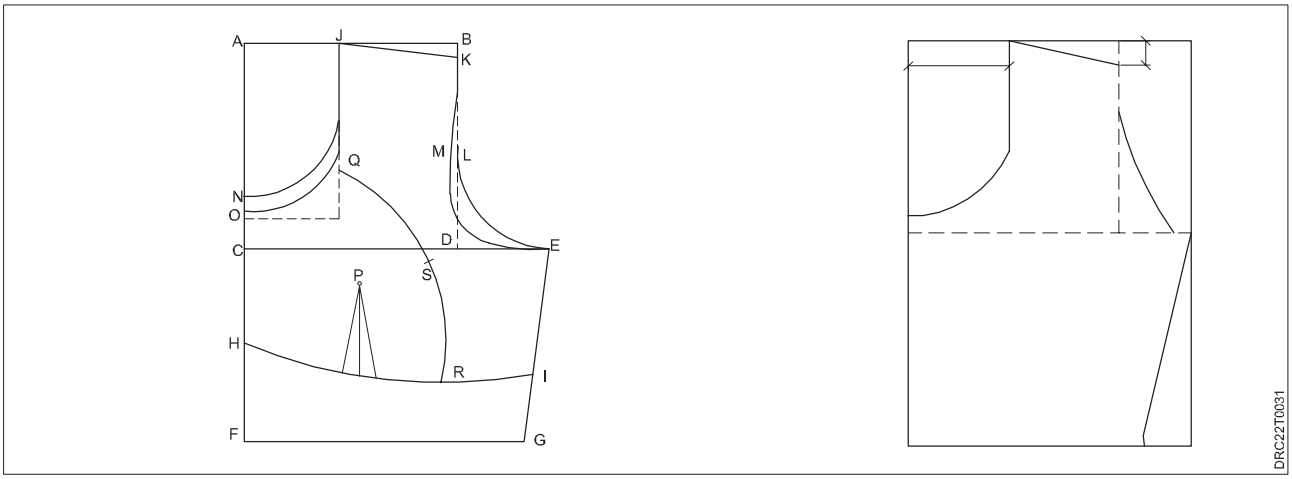
Design and develop a pattern for the back part of a choli cut blouse:

Measurements:

- CBL: Measure from the base of the neck to the desired length of the blouse (e.g., waist or hip length).
- SL: Measure from the base of the neck to the edge of the shoulder.
- CA: Measure around the fullest part of the chest.
- AH: Measure the desired size of the armhole.
- WA: Measure around the narrowest part of the waist.
- SS: Determine the desired length of the side seam.

Pattern Development:

- Using these measurements, draft the back part of the choli blouse on pattern paper, keeping in mind the neckline style, shoulder width, and waist shaping.
- Start by drawing a horizontal line for the shoulder, marking the SL measurement from the base of



Blouse Size Chart

Size	Front Neck Depth (inches)	Back Neck Depth (inches)	Bust (inches)	Waist (inches)	Sleeve Length (inches)	Sleeve circumference (inches)	Shoulder Length (inches)	Neck Style (inches)
32	5.5	7.5	32	25	5.8	10.0	12.0	Round
34	5.8	7.0	34	26	6.0	10.2	12.3	Round
36	6.0	7.5	36	28	6.2	10.4	13.0	Round
38	6.5	7.5	38	30	6.8	12.5	13.5	Round
40	6.8	7.5	40	31	7.5	13.0	14.0	Round
42	7.0	8.0	42	32	7.7	13.5	15.0	Round

MODULE 11 : Create patterns from block for designer garment

EXERCISE 46 : Design and develop patterns from block for designer tops using cowls

Objectives

At the end of this exercise you shall be able to

- basic bodies block, drafting the cowl neckline
- create flash lines, sewing construction.

Requirements

Tools/Materials

- Pencil, eraser, measuring tape, scissors, paper, fabric

Procedure

Cowls are a stylish and elegant addition to tops, creating a draped neckline that adds sophistication to any outfit. Here are some steps you can follow to achieve this fashionable look:

1 **Understand the Cowl Neckline**

- A cowl neckline consists of folds of fabric that fall from the neck, creating a beautiful draping effect in the front of the bodice.
- It's like having a built-in scarf, adding a touch of flair to your top.

2 **Start with a Basic Bodice Block**

- Before designing the cowl, you'll need a basic bodice block. If you're using Adobe Illustrator, ensure you have your bodice block ready.
- If you don't have one, consider creating a standardized basic block or a bespoke one tailored to your measurements1.

Drafting the Cowl Neckline

Adjust your basic bodice block to accommodate the cowl neck. Here's how: Explore various styles of cowls, from subtle drapes to deeper, more dramatic folds. Consider the depth and breadth of the drape to create different cowl neck designs. Remember that bias cuts allow the fabric to drape softly, enhancing the silhouette.

Use Adobe Illustrator to manipulate your block and employee specific tools for precise drafting.

- The basic block serves as the foundation for creating your cowl neck pattern. 2. Adjust the Neckline:
- Decide where you want the cowl to fall. Typically, it's positioned a few inches below the collarbone.
- Draw a new curve to indicate the new neckline for the cowl.

3 **Create Slash Lines**

- Draw slash lines from the shoulder seam down to the neckline. These lines will allow you to manipulate the fabric for the cowl.
- The number and placement of slash lines depend on the desired cowl style (subtle or dramatic).

4 **Tape Down the Pattern Piece**

- Cut along the slash lines and tape down the pattern piece.
- The facing line represents where you'll cut, and the cowl line indicates where you'll fold the fabric.

5 **Design Variations**

- Experiment with different cowl depths and draping techniques.
- You can create variations like:
  - Shallow cowls for a subtle look.
  - Deeper cowls for a more dramatic effect.
  - Asymmetrical cowls for added interest.

6 **Sewing and Construction**

- Once you've finalized your cowl pattern, transfer it to fabric.
- Sew the cowl neckline by following the fold lines you've created.
- Finish the edges neatly using bias binding or other suitable techniques.

Remember, cowl necklines are not only aesthetically pleasing but also relatively simple to draft. They add sophistication to tops and dresses. Feel free to experiment and tailor your cowl neck pattern to different garments and occasions

For more detailed guidance, you can explore tutorials online or take pattern-making courses that specifically cover cowl necklines.

- Design and develop patterns for designer tops using cowl necklines. Cowls add an elegant and modern touch to garments, and they're perfect for creating stylish tops. Here are some steps to get you started:

1 **Understand the Cowl Neckline**

- A cowl neckline consists of folds of fabric that fall from the neck, creating a draped effect in the front of the bodice.
- It's a versatile design that can be subtle or dramatic, depending on the depth and style of the cowl.

2 **Basic Block Preparation**

- Begin with your bodice basic block in Adobe Illustrator or on paper. If you're using Illustrator, ensure you have your digital basic block ready. o The basic block serves as the foundation for creating your cowl neck pattern.

3 **Adjust the Neckline**

- Decide where you want the cowl to fall. Typically, it's positioned a few inches below the collarbone.
- Draw a new curve to indicate the new neckline for the cowl.

4 **Create Slash Lines**

- Draw slash lines from the shoulder seam down to the neckline. These lines will allow you to manipulate the fabric for the cowl.
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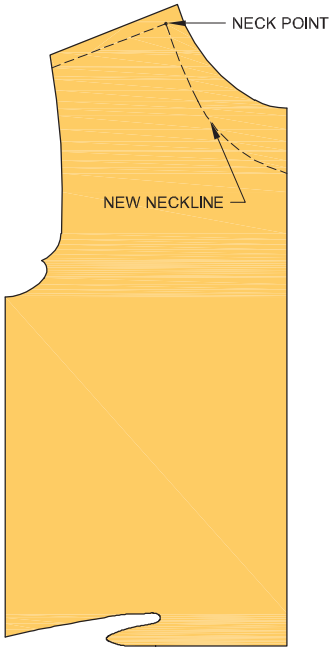


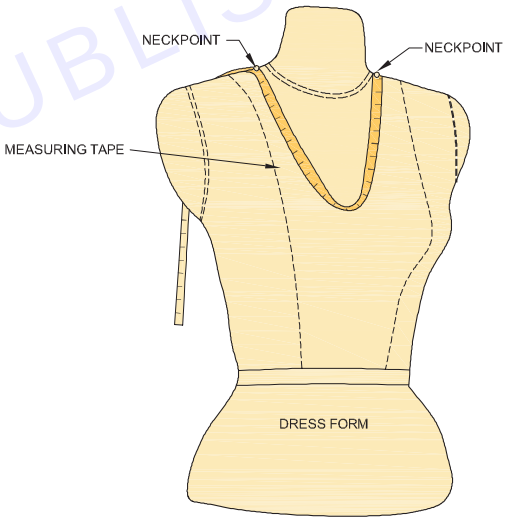
Cowl Neckline

Determine the cowl length and depth

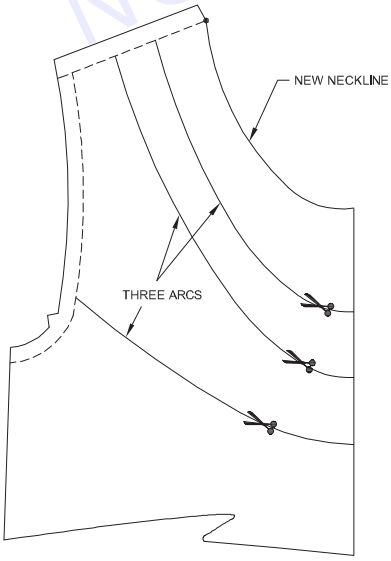
First you must decide on the finished cowl's depth, which determines how low the neckline falls and how much the cowl drapes. Front and back cowls can be made using the method described on the following pages.

1 Trace any pattern for a basic knit top, such as a T-shirt. Mark the pattern's original neck point at the shoulder seam (at the base of your neck where it joins the top of the shoulder) with a large dot.

2 Lower the pattern's neckline, if it is a high-jewel or crewneck. The neckline shown was lowered at center front to sit 5 inches below the collarbones, and the curve was redrawn. Cut away the original neckline.



3 On your body, drape a measuring tape with each end positioned at your neck points. Loosen or tighten the tape measure's drape to determine your preferred cowl depth. Note the measurement from neck point to neck point, and divide it in half. This is the amount of change applied to the pattern in the next steps. For example, if the total desired measurement is 20 inches, then the amount of change to the pattern is 10 inches. The front cowls of the red velvet top, at left, and the blue top, on page 24, are each 20 inches long; the red top's back cowl is 24 inches long. Check out this Teach Yourself to Sew article for more pointers on obtaining accurate measurements.



Alter the Pattern

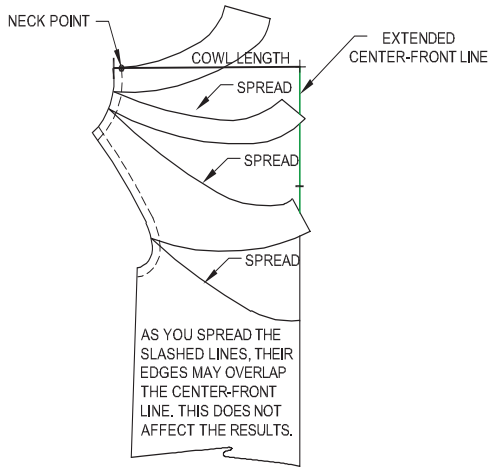
Using the slash-and-spread method, extend the pattern's neckline and add drape for a cowl.

1 From the pattern's center front, draw three arcs. End the two uppermost arcs at the shoulder seam and the lower arc about two thirds down the armscye. The exact position isn't critical, but each arc must intersect the center-front line at a 90-degree angle

2 Cut along all three arcs from center front to, but not through, the seamlines. Also, snip from the cutting line to the seamline, leaving a hinge at the seam line. Back the pattern with a large sheet of tissue or pattern paper.

3 Draw a vertical line from the center front neckline edge upward and about 8 inches long. Anchor the pattern's bottom center-front corner to the tissue with a pin or piece of transparent tape.

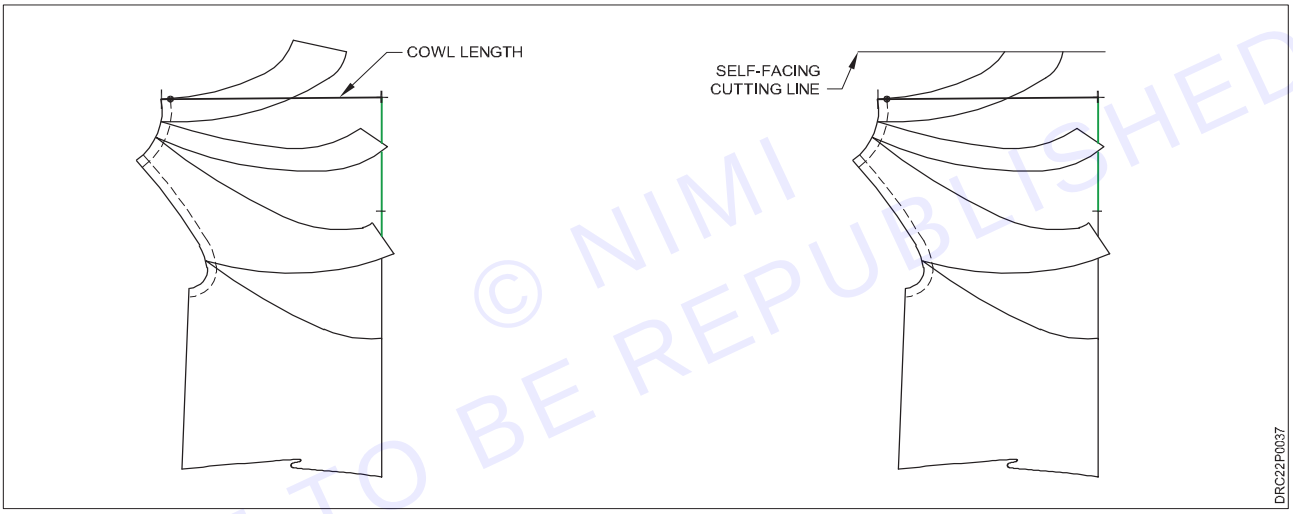
4 Spread the pattern along the three slash lines. Spread the sections equally, swinging the neck point away from center front, until the distance between the neck point and the extended center-front line equals the cowl length established in step 3. (For more voluminous, longer cowls, swing the entire pattern away from center front as you spread the slashed lines.) Tape the spread pattern to the backing tissue.



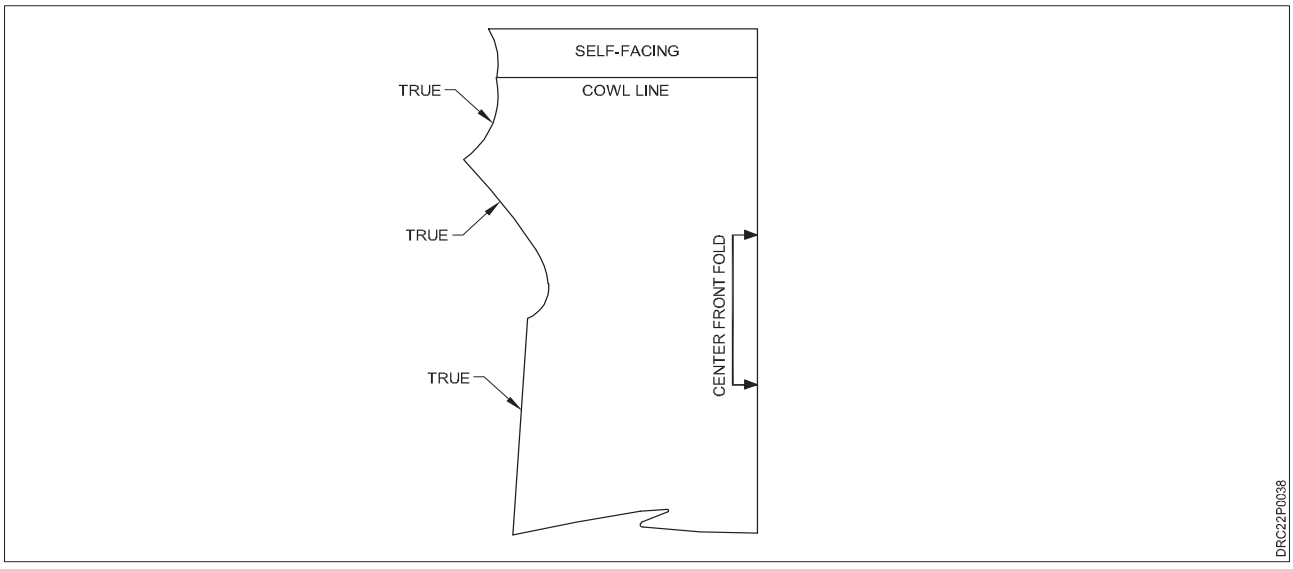
TIP: Add a cowl weight. Keep cowls hanging gracefully and prevent them from flipping inside out by sewing a fabric pocket for a drapery weight and attaching it to the cowl facing's center on the garment's interior.

5 Draw a straight line from the pattern's neck point to the center-front line. It should create a 90-degree angle at center front. Mark it "Cowl line."

6 Create a self-facing. Measure 2 inches above the cowl line at center front. Draw a line parallel to the cowl line, extending it beyond the shoulder point.



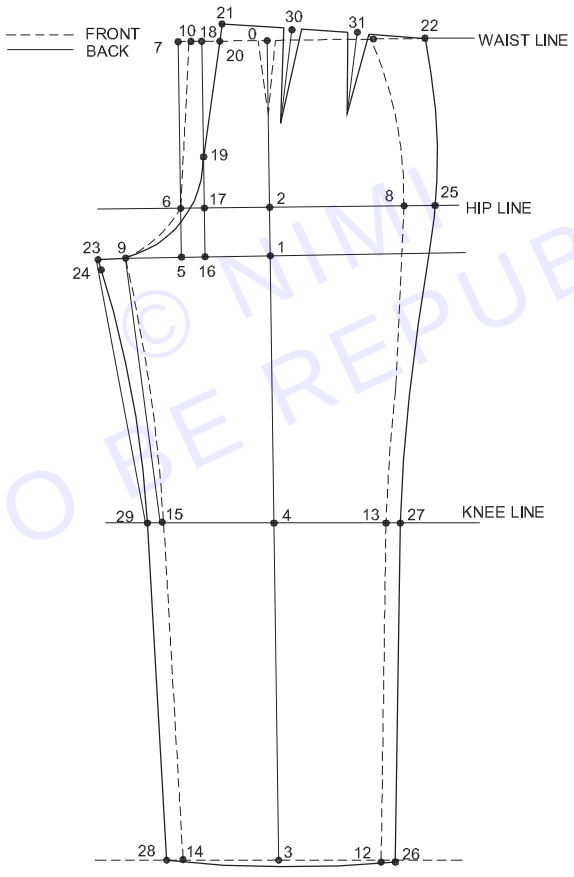
7 Cut along the facing's edge. Fold the pattern along the cowl line, and transfer the shoulder shape onto the cowl facing section. True the shoulder line and armscye curves, as well as the center front line and the side seam. If necessary, true the hem by drawing a gently curved horizontal line from the side seam to center front, creating 90-degree angles at the side seam and center front.



CONSTRUCTION TIPS

Sewing a cowl top is straightforward, but here are some tips for handling the cowl and its facing

- When cutting the fabric, make sure to clearly mark the cowl line on the fabric's wrong side.
- For a single-cowl top (a front cowl, for example): Finish the back neckline as desired (facing, binding, or turned edge). Align the front and back shoulder seams, right sides together, fold the self-facing along the cowl line, wrapping it over the back neckline so that the facing's right side is against the garment back's wrong side. Pin and sew the shoulder seam, catching the facing in the shoulder seam allowances. When finished, turn the facing over the seam allowances to its finished position, enclosing the shoulder seam allowances.
- For a double-cowl top, sew the front and back together at the shoulder seams, matching the front self-facing to the back self facing. Fold the self-facings in along the cowl line, wrong sides together, covering the shoulder seams. Either tack the edges to the seam allowances or stitch in the ditch of the shoulder seam from the right side, catching the facing.
- Add lingerie guards to the interior shoulder seams of a double-cowl top to prevent it from slipping off your shoulders.



THE BASIC TROUSER BLOCK

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EXERCISE 47 : Women's Shirt

Objectives

At the end of this exercise you shall be able to

- women's shirt.

This is an upper for torso wear, used by girls and women. The feature of the shirt is having the front open with button fastening. Either Short Sleeve or Long Sleeve is to be constructed. Normally one right Side chest pocket or two side chest pockets are required. Drafting of women's shirts is not easy like a line frock drafting. In this article I will explain how to drafting women's shirts step by step.

Suitable fabrics:

Cotton 100%, Cambric, Poplin, Denim [medium weight] Seer sucker, Polyester, Poly-crepe, Silk and Satin.

Material required:

2. 25 metre cloth width 36", 1.90 metre cloth width 42" to 44" and 1.60 metre cloth width 60".

Pattern parts:

Front cut 2. Back Cut 1. Sleeves cut 2. Cuffs cut 4. Yoke cut 2. Sleeve placket cut 4.

Measurements required:

Full length 28", Shoulder width 17", N. W. length 16 ½", Mid Bust 36", Waist 30", Hip 38", Neck 14, Short Sleeve length 10", Long sleeve length 23", Cult 2 ½ x 11", Pocket Size 4 ¾" x 5 ¼ .

Women's Shirt Drafting Procedure

Women's Shirt Drafting Procedure

Front part

1 – 0 = Full length + 1 ¼" for bottom hem + Seam.

2 – 0 = Armhole depth is Bust ¼ (-) 1 ¼".

3 – 0 = N. W. length + ½".

4 – 2 = Bust 1/4 + 1 ½".

5 – 3 = Same as 4 to 2 (-) ¾".

6 – 1 = Same as 4 to 2 + ¾".

7 – 0 = ½ shoulder width + ½" for seam.

8 – 0 = 1/5th Neck + ¼".

9 – 0 = 1/5th Neck shape neck part 9 to 8 as per draft.

10 – 8 = 1/5th Neck.

11 – 7 = shoulder's slope 1 ½".

A to B 3/4 '' upward at the lower arm hole curve portion. C = is the centre of 3 to 5 measures. Dart length 8". Dart intake is ½" as per draft making this waist dart in front and back portion of the shirt will give the proper fitness in the waist portion of the shirt. 9 to 9A the button standing line is ¾". 9B to 9A is the parallel line to the drawn.

Back part:

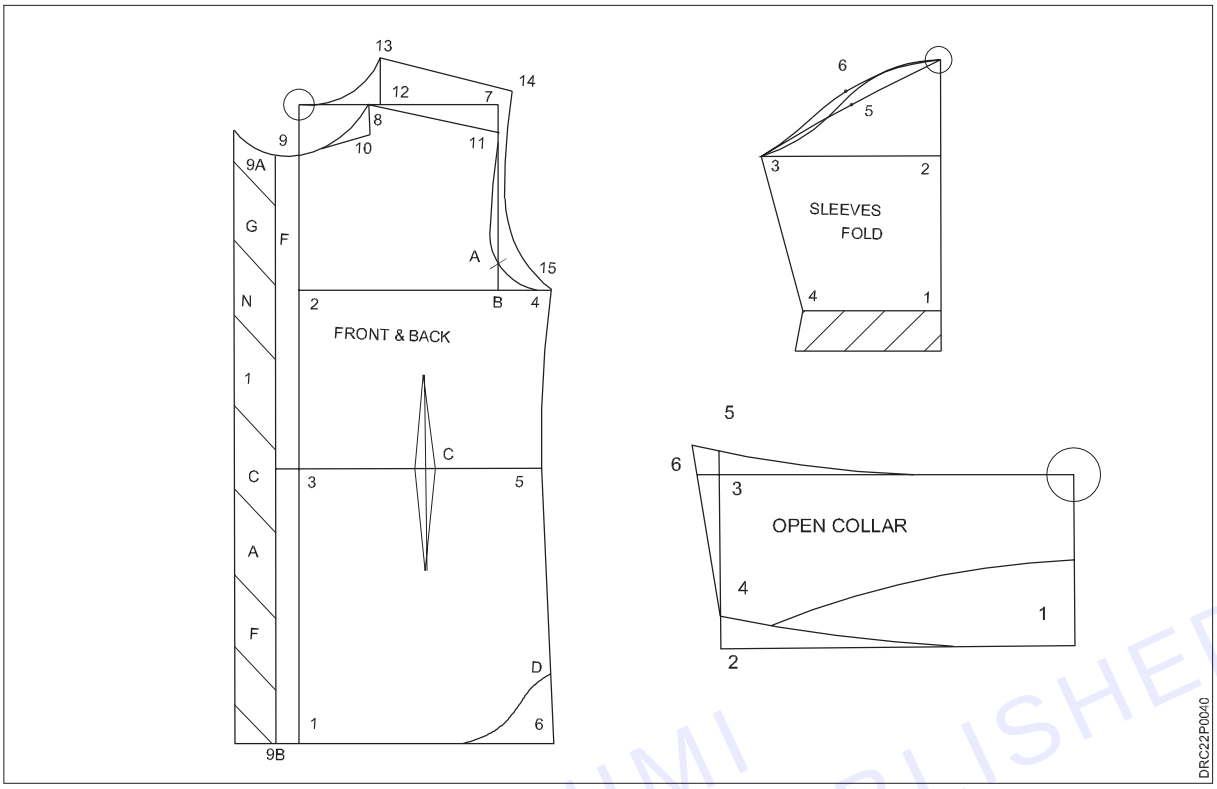
1 – 0 = Back part starting line.

12 – 0 = 1/5th Neck + ¼".

12 – 13 = upward 2 ¼".

14 – 11 is down ward 2 ¼ ".

14 to 15 is the back armhole curve.



Short Sleeves:

1 – 0 = Short sleeve length + ½".

2 – 0 = 1/8th Bust (–) ½".

3 – 2 = 1/4th Bust + ½".

4 – 1 = 3 to 2 measure (–) 1".

3 – 6 – 0 = Back Sleeve Shape.

3 – 5 – 0 is the front sleeve shape.

Collar (Open collar type):

1 – 0 = 3 ¼" as standard.

1 -2 = ½ Neck girth + ¼".

3 – 2 = Same as 1 to 0 measure.

4 -2 = ¾ for shape.

3 -5 = ½ upward.

6 – 3 is ½" outer point as per the draft.

The Basic Trouser Block

Measurements:

1 Waist: Measure around the narrowest part of the waist.

2 Hip: Measure around the fullest part of the hip.

3 Front Rise: Measure from the waistline in front to the crotch seam.

4 Back Rise: Measure from the waistline in the back to the crotch seam.

5 Thigh: Measure around the fullest part of the thigh.

6 Knee: Measure around the knee.

7 Ankle: Measure around the ankle.

8 Inseam: Measure from the crotch seam to the desired trouser length.

Notes:

1 **Ensure measurements are taken snugly but not too tight.**

2 **Add ease for comfort and movement. Typically 1-2 inches at the waist and hip, and 1 inch at the thigh, knee, and ankle.**

3 **Consider the fabric stretch for accurate fitting.**

4 **Adjustments may be needed based on individual body shapes and preferences.**

5 **Always make a muslin toile to test the fit before cutting into the final fabric.**

6 **Seam allowances are not included in the measurements; add them based on your sewing preferences.**

Long Description:

The basic trouser block serves as the foundation for creating well-fitted trousers of various styles. It starts with accurate measurements taken at key points of the body: waist, hip, front and back rise, thigh, knee, ankle, and inseam. These measurements are crucial for tailoring trousers that fit comfortably and flatteringly.

When taking measurements, it's essential to ensure accuracy by using a flexible tape measure and following a standardised procedure. The waist measurement should be taken at the narrowest part of the waist, usually just above the belly button. The hip measurement is taken around the fullest part of the hips and buttocks. The front and back rise measurements determine the length from the waistline to the crotch seam, both in front and back, respectively.

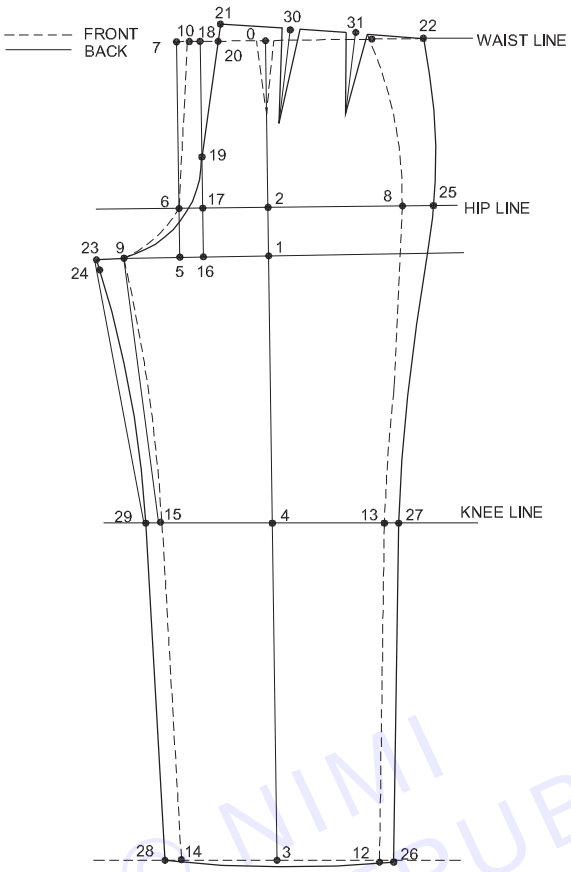
Thigh, knee, and ankle measurements are taken around the fullest parts of these areas. The inseam measurement is the length from the crotch seam to the desired trouser length, typically ending at the ankle or wherever the wearer prefers.

Once these measurements are obtained, it's important to add ease for comfort and movement. This is usually done by adding 1-2 inches of ease at the waist and hip and 1 inch at the thigh, knee, and ankle. However, this can vary depending on the fabric used and personal preference.

Additionally, consideration should be given to the fabric's stretch, as this will affect the fit of the trousers. Adjustments may be necessary based on individual body shapes and fitting preferences.

Before cutting into the final fabric, it's highly recommended to create a muslin toile, a mock-up of the trousers made from inexpensive fabric. This allows for adjustments to be made to the fit without wasting the final fabric.

Finally, seam allowances are not included in the measurements provided for the basic trouser block. Seam allowances should be added based on the sewer's preference and the specific construction techniques being used.



THE BASIC TROUSER BLOCK

DRC22P0039

Design Formal Wears

Objectives: At the end of this exercise, you will be able to:

- design a formal wear for men and women
- design formal wears for children.

Requirements

Materials

- Cartridge paper of A3 size
- Pencils 2H
- Pencil Eraser
- Brush Set
- Poster colour Set
- Black fine liners set

Procedure

TASK 1: **Design a formal wear for men and women**

1 Draw a male and female fashion figure with formal wear. (Fig 1)

2 Design garments according to the theme “casual”.

3 Decide the fabrics suitable for the designed casual wears.

4 Sketch the designed casual wears with its detailed style features.

5 Apply suitable colours to the garment with proper effects.

— — — — —

TASK 2: **Design a formal wear for men and women**

1 Refer the above task and design casual wears suitable for boys, girls and children.

2 Select your own colour medium and apply.

Note: Get the work checked by your instructor.

Design Casual wears

Objectives : At the end of this exercise, you will be able to:

- design a casual wear for men and women
- design casual wears for children.

Requirements

Materials

- Cartridge paper of A3 size
- Pencils 2H
- Pencil Eraser
- Brush Set
- Poster colour Set
- Black fine liners set

Procedure

TASK 1: **Design a casual wear for men and women**

1 Draw a male and female fashion figure with casual wear. (Fig 1)

2 Design garments according to the theme “casual”.

3 Decide the fabrics suitable for the designed casual wears.

4 Sketch the designed casual wears with its detailed style features.

5 Apply suitable colours to the garments with proper effects.

TASK 2: **Design Casual wear for Children**

1 Refer the above task and design casual wear suitable for boys, girls and children.

2 Select your own colour medium and apply.

Note: Get the work checked by your instructor

Design School Uniforms

Objectives : At the end of this exercise, you will be able to:

- design School uniforms.

Requirements

Materials

- Cartridge paper of A3 size
- Pencils 2H
- Pencil Eraser
- Brush Set
- Poster colour Set
- Black fine liners set

Procedure

TASK 1: **Design School uniforms for Children**

1 Draw a boy and girl fashion figure with School uniforms. (Fig 1)

2 Design garments according to the theme “School Uniform”.

3 Decide the fabrics suitable for the designed school uniforms.

4 Sketch the designed school uniforms with its detailed style features.

5 Apply suitable colours to the garments with proper effects.

6 Refer the above and design other set of school uniforms for children.

7 Select your own colour medium and apply.

Note: Get the work checked by your instructor.

EXERCISE 48 : Design and develop patterns from block for frock style - 2 using variation of darts, tuck, pleat, flare, gather, sleeves, silhouettes, collars, pocket, neckline, fashion accessories, etc

Objectives

At the end of this exercise you shall be able to:

- design and develop Patterns from Block for Frock Style by using various features..

Requirements

Tools/Materials

- Pencil, sharpner, erase, scissors, measuring tape

Job Sequence

Frock style

Creating beautiful frocks involves understanding the basics of pattern development. Here are some approaches to design and develop patterns for different frock styles:.

1 A-line frock pattern

- The A-line frock is a classic silhouette that flares out gently from the shoulders to the hem. It's versatile and suits various occasions.
- Pattern drafting steps:
  - Start with a basic bodice block (sloper) that fits well.
  - Extend the bodice downward to the desired length (usually knee-length for A-line frocks).
  - Gradually widen the side seams from the underarm to the hem, creating an A-line shape.
  - Add darts or shaping as needed for a flattering fit.
  - For sleeves, choose from short, cap, or three-quarter length.
  - Neckline options can include round, V-neck, or boat neck designs.
  - Remember to include seam allowances.

Layout and cutting

- Lay out your pattern pieces on the fabric, ensuring the grainline is straight.
- Cut the fabric following the pattern lines.
- Assemble the frock by sewing the bodice, sleeves, and skirt together.

2 Hip line frock pattern

- The hip line frock emphasizes the waist and hips, creating a feminine silhouette.
- Pattern Drafting Steps:
  - Start with a fitted bodice block.
  - Extend the bodice downward to the hip level.

- Add shaping at the waist and hips for a snug fit.
- Choose sleeve and neckline styles.
- Consider adding pleats, gathers, or panels for visual interest.

Layout and cutting

- Cut the fabric pieces according to the pattern.
- Sew the bodice, waistband, and skirt together.
- Finish with a zipper or buttons at the back.

3 Neckline designs:

- Experiment with different necklines to create unique frocks.
- Options include:
  - Boat neck: Wide and elegant.
  - Sweetheart: Curved and flattering.
  - Square neck: Angular and modern.
  - Halter neck: Tied at the back of the neck.
  - Keyhole: Small opening near the neckline.
  - Collar variations: Peter Pan, Mandarin, or shawl collars.

4 Puffy and short sleeve patterns

- Puffy sleeves add a playful touch to frocks.
- Short sleeves can be straight or slightly gathered.
- Adjust the sleeve width and length based on your preference.

Remember, practice makes perfect! Feel free to explore variations, mix and match elements, and create your own signature frock designs.

Variation of dartas

Darts play a crucial role in garment construction, shaping fabric to fit the contours of the body. Let's explore the different types of darts and their placements:

1 Single-pointed dart

- This dart is commonly used on skirts at the waist and on trousers and blouses at the bust.
- It is narrow at one end and wide at the other, forming a V shape.

Double-Pointed Dart (also known as a Fish-Eye Dart or Body Dart):

- Used for jackets and dresses that fit at the waist.

Different dart placements

1 Bust Dart:

- Usually starts about two inches below the armhole and is also called a side dart.
- It is straight and fits under the arm, pointing toward the bust point.

Shoulder dart

- Ensures proper fitting around the shoulder area.

Mid shoulder dart

- Begins slightly closer to the neck than halfway on the shoulder seam.
- Slants slightly toward the centre front, ending at the point of the bust.

Mid armhole dart

- Positioned within the armhole area.

Mid neckline dart

- Located along the neckline.

2 Standard waist dart

- Commonly found at the waist line

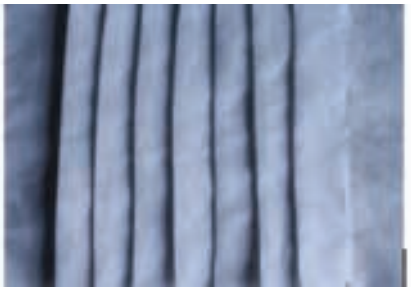
Remember that darts not only ensure a better fit but also contribute to the overall design and style of the garment.

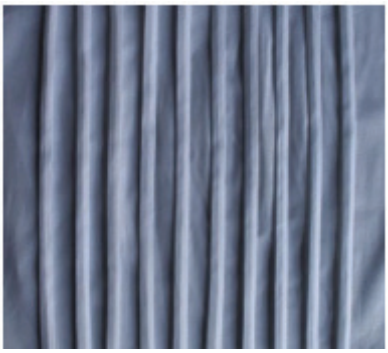
Tuck & pleat

Tucks are kind of like pleats. The only difference is that tucks are stitched at their base so that the folds remain secured. You might be most familiar with the tiny pin tucks, but there are actually various different kinds of tucks as you'll soon see. So this is a pretty versatile way to manipulate the surface of the fabric.

Types of tucks

Ok, now that you have the basics, let's see some different kinds of tucks you can create.



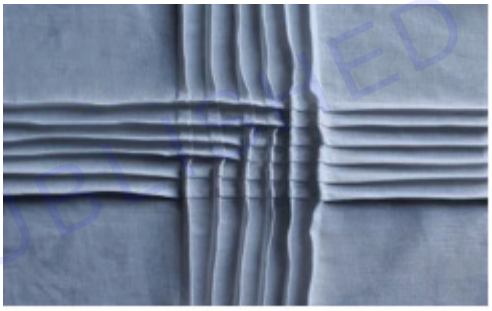


Wide – narrow (pin-tuck)

Here are a couple of examples of how you can achieve a different look simply by changing the size of the tuck.

Cantered tucks

You know box pleats? Well, also tucks can be done in the same way. It's just that you stitch them at the base first.



Cross tucking

This example has tucks going both horizontally and vertically, creating a cross in the middle. You get different results by changing the order in which you sew the tucks. In my example, I stitched 2 rows at a time vertically and then 2 horizontally.

Tucks in random directions

Never mind being precise and following the grain line. This is freehand tucking! Great way to manipulate fabric.

Although you Could make a pattern, too, I think this is more fun if you just stitch completely randomly. The fabric will have a completely random shape in the end, too. So if you want to use this in a garment afterwards, I suggest you have a large enough piece of fabric to start with.

Tapered tucks

Not following the grain line reminded me of this piece I published on Instagram. It's like Origami technique meets Tucks. I secured the cantered folds at their base with stitching.

Pleat

Pleats are a wonderful way to add texture and volume to garments. Let's explore the procedure for creating pleats:

Box pleats

Box pleats are commonly used in home decor items like curtains and table skirting.

To create box pleats

- Cut a fabric strip to the desired length, adding an extra 2 inches for each pleat.
- The width of the strip should be double the desired finished pleat width.
- Fold the strip in half lengthwise with right sides facing each other and press to create a center crease.
- Mark equal intervals along the fabric where each pleat will be located.
- Take the first mark and fold it toward the center crease, pressing the fold in place.

Tapered Tucks

Box pleats

Honeycomb tucks

Getting into more time-consuming fabric manipulations, meet honeycomb tucks!

Pleat

Pleats are a wonderful way to add texture and volume to garments. Let's explore the procedure for creating pleats:

1 Box pleats

- Box pleats are commonly used in home décor items like curtains and table skirting.
- To create box pleats:
  - Cut a fabric strip to the desired length, adding an extra 2 inches for each pleat.
  - The width of the strip should be double the desired finished pleat width.
  - Fold the strip in half lengthwise with right sides facing each other and press to create a center crease.
  - Mark equal intervals along the fabric where each pleat will be located.
  - Take the first mark and fold it toward the center crease, pressing the fold in place.
  - Next, fold the second mark in the opposite direction from the first pleat, ensuring they touch at the center crease.
  - Repeat this process for all p.

2 Knife pleats

- Knife pleats are handmade pleats pressed firmly in one direction.
- To sew knife pleats:
  - Iron the fabric with right sides together to ensure clean edges.
  - Lay the fabric right side down and fold the top edge down by 1/2 inch, forming a crease.
  - Fold the fabric again, parallel to the first fold.

Remember, the key steps for creating pleats are measure, fold, press, and sew. Whether you're working on skirts, dresses, or home décor, mastering pleats adds a delightful touch to your sewing projects.

Flare

The garment manufacturing process step by step. This sequential process involves various departments and operations to transform raw materials into finished apparel. Here's a detailed overview:

1 **Design and development**

- **Design intent:** Establish the design concept for the garment.
- **Research:** Explore construction and design elements.
- **Sketching:** Create initial design concepts.
- **Analysis and adjustment:** Evaluate and modify the initial design as needed.
- **Fashion illustrations:** Develop detailed fashion illustrations.
- **Design brief:** Prepare a comprehensive design document for communication.

2 **Sample section**

- Develop various types of samples:
  - **First pattern sample:** Convert the design into a physical garment.
  - **Development sample:** Derived from the primary pattern sample.
  - **Second pattern sample:** Adjusted based on designer feedback.
  - **Counter sample:** Follow a different sample provided by the merchandiser.
  - **Salesman sample:** Created when pricing is confirmed.
  - **Photo sample:** Used for catalog photoshoots.
  - **Approval sample:** Sent to the buyer for approval.
  - **Pre-Production Sample:** Produced before bulk production.
  - **Production Sample:** Assures compliance with specifications.

3 **Pattern making**

- Develop patterns based on the approved design.
- Ensure accurate fit and proportions.

4 **Grading**

- Create size variations (grading) for different sizes.
- Maintain consistent proportions across sizes.

5 **Marking and fabric cutting**

- Transfer pattern markings onto fabric.
- Cut fabric pieces according to the markers.

6 **Sewing**

- Assemble fabric pieces by stitching.
- Ensure quality during sewing.

7 **Finishing**

- Ironing and pressing to enhance appearance.
- Attach hang tags and labels.

8 Final Inspection and Packaging:

- Inspect the finished garment for quality.

Gather

Gathering is a technique used to create soft, full, and billowy sections in clothing. Here are some methods you can follow:

1 Two rows of basting stitches

- This is a standard and versatile gathering technique.
- **Step 1:** Select a lightweight woven fabric.
- **Step 2:** Set your sewing machine to the longest stitch length (around 4.0-4.5).
- **Step 3:** Measure and mark the area where you want to gather.
- **Step 4:** Sew two parallel rows of basting stitches along the raw edge of your fabric, on either side of where the final seam will be.
- **Step 5:** Leave long thread tails.
- **Step 6:** Pull the top threads gently to gather the fabric evenly.
- **Step 7:** Secure the gathers with pins or additional stitches.
- **Step 8:** Remove the basting stitches after seaming.
- **Tip:** For heavier fabrics like linen, aim for a minimum gather of 1.5 times the finished length.

2 Hand sewing method

- If you prefer hand sewing, use a similar approach:
  - **Step 1:** Create two parallel rows of running stitches by hand.
  - **Step 2:** Gather the fabric by pulling the top threads.
  - **Step 3:** Secure the gathers as needed.

Remember to adjust the gathering technique based on your fabric weight and desired fullness.

The process of sewing a set-in sleeve step by step. A set-in sleeve is a common style used with woven fabrics, and it requires a bit of attention to detail. Here's how you can do it:

1 Prepare your materials

- Gather your fabric, sleeve pattern, and sewing machine.
- set-in sleeve is a common style used with woven fabrics, and it requires a bit of attention to detail.

2 Prepare your materials

- Gather your fabric, sleeve pattern, and sewing machine.
- Make sure you have the correct sleeve for your garment (front and back notches are essential).
- Make sure you have the correct sleeve for your garment (front and back notches are essential).

3 Sew the shoulder seams

- First, sew the shoulder seams of your bodice together. This creates the opening where the sleeve will be attached.

4 Mark the sleeve cap

- On the sleeve piece, mark the center top (where the shoulder seam will meet) and the notches for front and back.
- These notches help you align the sleeve correctly.

5 Create ease stitches

- Along the sleeve cap (the curved top edge), sew two rows of gathering stitches.
- These stitches add ease and allow the sleeve to fit smoothly into the armhole.

6 Match the Sleeve to the Armhole:

- With right sides together, align the sleeve cap with the armhole.
- Match the notches on the sleeve to the corresponding notches on the bodice.

7 Pin and sew

- Pin the sleeve in place, distributing the ease evenly.
- Stitch along the armhole, following the gathering stitches.
- Be careful not to create visible gathers on the face of the garment.

8 Press and finish

- Press the seam allowance toward the sleeve.
- Finish the raw edges (serge or zigzag stitch) to prevent fraying.

9 Repeat for the other sleeve

- Repeat the process for the other sleeve.
- Remember that achieving an even look for both sleeves may take practice.

10 Check fit

- Try on the garment to ensure the sleeves sit comfortably and allow movement.

11 Final touches

- Hem the sleeves if needed.
- Press the entire garment for a polished finish.

Remember, sewing sleeves can be challenging at first, but with practice, you'll improve. Take your time, follow each step carefully, and soon you'll master the art of setting in sleeves.

Silhouettes

The garment manufacturing process step by step. This sequential process involves various departments and operations in the apparel industry.

1 Design

- The process begins with conceptualizing the design. This involves creating sketches, mood boards, and visualizing the garment's overall look.
- Designers consider factors like aesthetics, functionality, and market trends.
- Start with a sewing pattern that includes a collar design. Collars are usually integrated into the shirt or dress design rather than added later.
- Opt for a pattern labeled "easy" or "beginner" if you're new to sewing collars.

2 Select fabric

- Choose fabric for the collar. Your pattern will specify the type of fabric needed.
- Pre-wash and dry the fabric to prevent shrinkage.

3 Cut out collar pieces

- Use the paper pattern included with your sewing pattern to cut out collar pieces from your fabric.
- Cut around any notches included in the pattern for alignment later.

1 Definition of silhouette

- The silhouette refers to the overall shape of a garment. It's the first impression that a piece of clothing makes when seen on the runway or during fashion presentations.

2. Importance of Silhouette:

- **Decision-Making:** Silhouettes help designers decide which aspects of the body to highlight and which to hide.
- **Visual Impact:** A well-defined silhouette creates a strong visual impact and sets the tone for the entire design.
- **Body Proportions:** By manipulating the silhouette, designers can achieve balance and harmony in the overall look of the garment.

3 Characteristics of well-finished garments

- **Comfort:** A well-fitted garment feels comfortable and allows natural movement.
- **Satisfaction:** The wearer should feel satisfied with how the garment sits on their body.
- **Ease:** Proper ease ensures that the garment adjusts naturally during activities.
- **Fashion Relevance:** The garment's silhouette should align with current fashion trends.
- **Seam Allowance:** Correct seam allowances contribute to a well-finished look.

4 Factors affecting good fit and silhouette

- **Pattern Alteration:** Altering patterns to achieve better fit and silhouette
- **Individual Requirements:** Determining whether medium or good fit is needed.
- **Sewing Process:** Careful sewing work ensures a well-fitted garment.
- **Layout of Fabrics:** Proper fabric placement affects the final silhouette.
- **Type of Grain:** Understanding fabric grain for optimal fit.
- **Method of Cutting:** Precise cutting impact

1 Sample section

- Different types of samples are crucial for garment development:
  - First Pattern Sample: Transforms the buyer's design into a physical garment.
  - Development Sample: Derived from the primary pattern sample.
  - Second Pattern Sample: Adjusted based on designer feedback.
  - Counter Sample: Follows a different sample provided by the merchandiser.
  - Salesman Sample: Created when pricing is confirmed.
  - Photo Sample: Used for catalog photoshoots.
  - Approval Sample: Sent to the buyer for approval.
  - Pre-Production Sample: Represents the bulk production version.
  - Production Sample: Assures compliance with specifications.
  - Shipping Sample: Sent to shipping inspectors before delivery.

2 **Pattern making**

- Develop patterns based on the approved sample.
- Patterns guide fabric cutting and assembly.

3 **Cutting**

- Fabric is cut according to the patterns.
- Sorting and bundling of cut fabric occur.

4 **Stitching/Assembling**

- Garment parts are sewn together.
- Quality inspection ensures accurate stitching.

5 **Finishing**

- Ironing and pressing to enhance appearance.
- Adding labels and tags.

6 **Final inspection**

- Thoroughly check the finished garment.
- Ensure it meets quality standards.

7 **Packaging**

- Properly pack the garments.
- Size-wise cartoning.

8 **Warehouse and shipment**

v Store the finished products.

- Prepare for shipment.

Remember that this is a high-level overview, and each step involves detailed processes and specialized skills. Garment manufacturing is a collaborative effort across various departments, resulting in the transformation of raw materials into fashionable clothing items.

Collars

Sewing a shirt collar involves several steps. Let's break it down into a simple procedure:

1 **Choose a pattern**

- Start with a sewing pattern that includes a collar design. Collars are usually integrated into the shirt or dress design rather than added later.
- Opt for a pattern labeled "easy" or "beginner" if you're new to sewing collars.

2 **Select fabric**

- Choose fabric for the collar. Your pattern will specify the type of fabric needed.
- Pre-wash and dry the fabric to prevent shrinkage.

3 **Cut out collar pieces**

- Use the paper pattern included with your sewing pattern to cut out collar pieces from your fabric.
- Cut around any notches included in the pattern for alignment later.

4 **Add interfacing**

- Iron interfacing onto the wrong side of one collar piece.
- Interfacing adds structure and stability.

5 Sew the collar together

- Pin the undercollar to the upper collar, right sides together.
- Sew along the outer edge, pivoting at corners.

6 Trim and turn

- Trim seam allowances and clip corners to reduce bulk.
- Turn the collar right side out.

7 Attach collar to shirt:

- Follow your pattern's instructions to attach the collar to the neckline of your shirt.
- Align notches and stitch carefully.

8 Press the collar

- Iron the collar to ensure crisp edges and a professional Finis.

Pocket

The steps for creating a pocket in a garment. Whether you're sewing by hand or using a machine, here's a step-by-step guide:

1 Create your pattern

- Begin by making a pattern for your pocket on paper. Decide on the size and shape of the pocket you want to create.

2 Pin and cut the fabric

- Fold your fabric in half and pin your pattern to it.
- Cut out the fabric following the pattern you've created.

3 Preparing the garment

- Identify where you want to place the pocket on your garment.
- Make space for the pocket by cutting an opening in the garment fabric.

4 Placing in the pocket

- Position the pocket fabric (right side facing) over the opening in the garment.
- Pin the pocket in place, aligning the edges.

5 Sew away

- Sew around the edges of the pocket, leaving the top (opening) unsewn.
- Use a straight stitch or a zigzag stitch, depending on your preference.

6 Seal the pockets

- Turn the pocket right-side out through the opening.
- Press the edges to ensure a neat finish.
- Optionally, you can topstitch around the pocket to secure it further.

Remember, the size and style of the pocket can vary based on your design and garment type. Feel free to get creative with pocket shapes and placements.

Neckline

A V-neck can add a polished touch to your garment. Let's break down the steps for sewing a V-neck with facing:

Cut the facing

- Begin by cutting out the facing using your garment's pattern. Lay the pattern piece for the facing on your facing material and pin it in place. Cut out the facing.

1 Stabilize the fabric

- Make stay stitches around the neckline of your garment. Set your sewing machine to create very short, straight stitches.
- Turn your garment inside out and sew around the front and back of the neckline, leaving a 1/2 inch (1.3 cm) seam allowance as you sew.

2 Position the facing

- Flip your garment so the pattern faces out and lay it flat.
- Place the facing on the garment so the wrong side faces up. Align the raw edges of the facing with those of the garment.

3 Sew the facing

- Sew the facing to the neckline using short, straight stitches. Start sewing from the bottom point of the V and continue around the entire neckline.

4 Trim and notch

- To help the neckline lay flat, trim triangular notches along the seam allowance. These notches should be about every 1 inch (2.5 cm) along the seam line.

5 Under stitch

- Unfold the garment and facing material so the pattern side faces up.
- Under stitch by sewing the seam allowances to the facing, about 1/8 inch away from the original stitching line.
- Press the facing to the inside of the garment, and you're done.

nt manufacturing. Except fabric of garment, the other materials are known as garment accessories. These have to be chosen in such a way that they complement the outer fabric both aesthetically, in terms of decoration, and practically, in terms of ensuring that the garment performs as expected in its intended end use.

- **Functions of garments accessories**

Accessories play a vital role in garment manufacturing. Accessories are used to serve different functions of a garment. Some of the functions are given below:

1 Garments accessories sometimes act as a decorative material.

Fashion accessories

Accessories have great importance to make a complete garment. A garment is made not only from the apparel fabric but also various accessory items. Fabric is the basic material in garment Accessories can make a garment more suitable to wear.

2 Accessories are used to make the garments more flexible.

3 Accessories help to ensure the garment's durability.

4 To fulfill customer demand different accessories are used.

Types of garment accessories

Various kinds of accessories are used on garments, some are part of the garments such as buttons, zippers, interlining etc. while others are used for decorating and enhancing the product appearance such as sequins, embroidery etc.

Note: Maximum we are confused about trimmings and accessories. Which are trimmings and which are accessories? These are common questions. I have published two articles on it (those are given below). I think those articles will clarify it.

1 Different Types of Garments Accessories with Pictures

2 Different Types of Trims Used in Garments

Normally garment accessories can be classified in three ways:

a Basic accessories

b Decorative accessories

c Finishing accessories

A List of basic garment accessories

1 Thread

2 Zipper

3 Interlining

4 Button for example: Snap button, Plastic button, Metal button.

5 Label: Main label, Size Label, Wash care label

6 Motif: Leather, Plastic, batch Metal

7 Pocketing fabric

8 Lining

9 Velcro

10 Elastic

11 Cord

12 Ribbon

13 Toggles

14 Rivet

15 Collar bone.

Features, functions and uses of basic garment accessories are given below

Button

A button is a small disc, typically round, object usually attached to an article of clothing in order to secure an opening, or for ornamentation.

Zipper

A zipper or (zip fastener) is a popular device for temporarily joining two edges of fabric. It is used in clothing (e.g. jackets and jeans), luggage and other bags, sporting goods, camping gear (e.g., tents and sleeping bags), and other daily use items. There are different types of zippers. They are:

- Metallic zipper
- Coil zipper
- Invisible zipper
- Plastic molded zipper
- Open-ended zipper
- Close-ended zipper
- Magnetic zipper

Lining

Lining is one kind of trimmings which is used underneath garments and used next to skin.

Interlining

Interlining is a layer of flannel fabric sewn in between the face fabric and the standard lining. Interlining provides insulation and also adds a luxurious weight and softness, improves the drape of the fabric, and protects fragile fabrics. It is a popular choice with silk draperies.

Garment pattern

The individual part of a garment which is shaped by hard paper is called pattern.

Working pattern

The patterns set which is used for sample making are called working patterns.

Marker

Marker is a large thin paper which contains shape of required pattern pieces or a particular style of garments.

Fabric spreading

Spreading means smooth lying out of fabrics as per marker length and width.

Fabric cutting

Cutting is the process by which we can cut fabrics as per marker dimension with the help of a knife.

Bespoke garments

Bespoke Garments are made on the basis of individual clients and according to the individual's size and requirement.

Ready to wear garments

Ready to wear garments is made on the basis of target common groups, according to size charts, derived from statistical analysis.

List of decorative accessories

1 Elastic tape
2 Buttonhole tape
3 Piping
4 Moiré ribbon
5 Seaming tape
6 Welted tape
7 Ribbed tape
8 Velvet ribbon
9 Bias binding
10 Stamped tape
11 Taffeta ribbon
12 Galloon
13 Fringes
14 Cords
15 Tassels
16 Rosettes
17 Soutache
18 Pompons.

Darts & Pleats

Objectives: At the end of this exercise you shall be able to

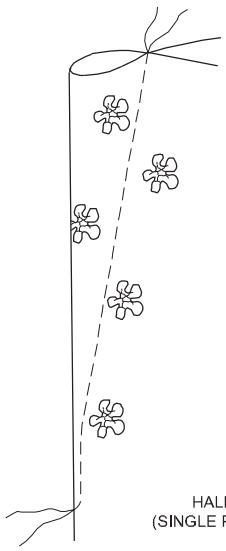
- name the types of darts and explain their constructional features
- explain important construction techniques
- state the application of tracing wheel.

Darts are one of the most basic structural elements in dressmaking. Darts are necessary because the body is not straight and flat but curved. A dart is used to shape a garment around the contours of the body and to allow freedom of movement, comfort to the wearer and also to make the garment look attractive. Darts are used mainly on women's dresses to allow fullness at the bust, hips, shoulders and elbows.

Standard dart (half dart): It is triangular in shape, wide at one end and pointed at the other. (Fig 1)

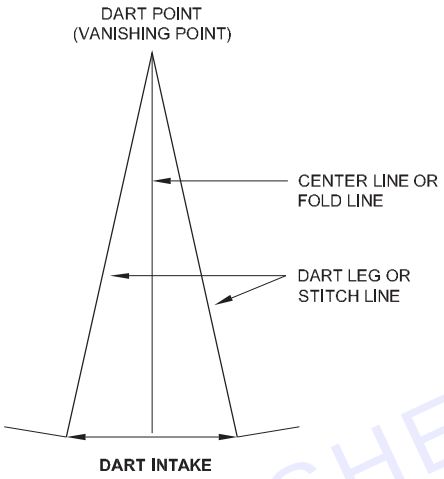
The pointed side should always be directed to the fullest part of the body. Tacking and stitching should start from the wide end towards the dart point. The wide base of a dart takes in fabric fullness, so that a garment fits the narrower parts of the body. The space inside the triangle is called intake which will appear on the wrong side of the garment. The dart stitching lines are matched, then stitched together. These stitching lines can be straight or gently curved for a close fit around the shape of the body. (Fig 2)

Fig 1



HALF DART
(SINGLE POINT DART)

Fig 2



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Double pointed darts (full darts): These are wide in the middle and pointed at both ends. (Fig 3) They are used at waist line of one-piece dresses.

After stitching, vertical darts are pressed towards centre front or centre back, and horizontal darts are pressed downwards.

In general, it is better to set two small darts than one large dart.

A very deep and bulky dart intake is slashed and pressed open, the edges are over casted or pinked. These darts are called **slashed darts**. (Fig 4)

Fig 3

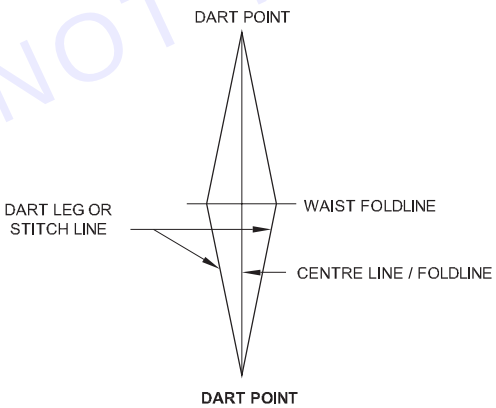
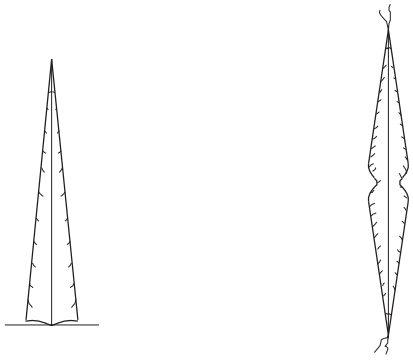


Fig 4



SLASHED DART
(SINGLE POINT)

SLASHED DART
(DOUBLE POINT)

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Well constructed darts appear on the right side as a seam. The seam should not bulge but taper gradually to point. Darts set better, if pressed over a round pressing pad on the wrong side.

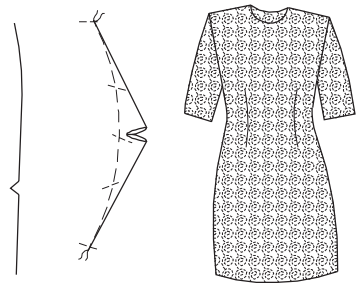
The **contour dart** (variation of full dart) is used for semi-fitted and fitted styles of garments which don't have a waist seam. These darts have two pointed ends, one providing fullness at the bust, the other fullness at the hip. The wide central part of the dart shapes the fabric at the waist. Clipping of intake is done in the middle of the dart; it will relieve strain at the waist and other curved sections and allow the dart to lie smooth. (Fig 5)

The **French dart** (variation of half dart) gives a semi-fitted shape. It combines underarm bust dart and waist dart into one long dart running from the bust down at an angle towards the side seam. This dart is cut open on its center line before sewing so as to match the stitching lines. (Fig 6)

Before stitching, the darts have to be transferred from pattern to the fabric. Depending on the material two methods can be applied: tailor marks will be used on silk, polyester etc. and loosely woven material. On cotton marking with a **tracing wheel** is a fast method.

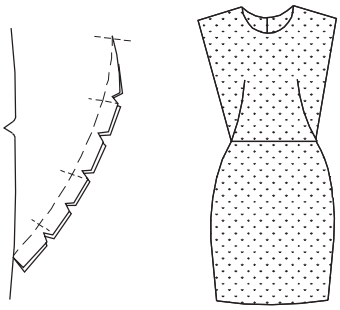
The tracing wheel is a pinned metal tool which is used to transfer pattern marks or construction lines on the lower layer of fabric or paper. (Fig 7)

Fig 5



CONTOUR DART

Fig 6



FRENCH DART

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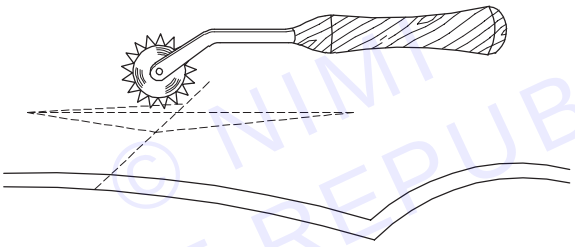
Fig 7



TRACING WHEEL

DRC22P0044

Pleats

Objectives: At the end of this exercise you shall be able to

- explain the basic construction features of pleats using the technical terms related to pleats
- explain the difference between knife pleats, box pleats and inverted pleats.

Pleats are folds of fabric that are made to give decorative flare and fullness to a garment. They are commonly used on skirts and dresses, but also on sleeves or other components of a garment.

Construction features of pleats: Pleats are folded in vertical direction.

- Each pleat has an inner and outer fold. The outer fold line is placed on a placement line.
- The distance between inner and outer fold is called pleat depth.
- The pleat size consists of double the pleat depth.
- The distance between two neighboring outer folds is the pleat width (gap between the pleats).
- The width of material before pleating is called the pattern width.
- After pleating it is called the pleated section. The pleated section does not consider allowances for plackets etc. (Fig 1)

There are three basic types of pleats

Knife pleats are the most common form of pleats. The outer fold lines are all placed in one direction. (Fig 2)

Fig 1

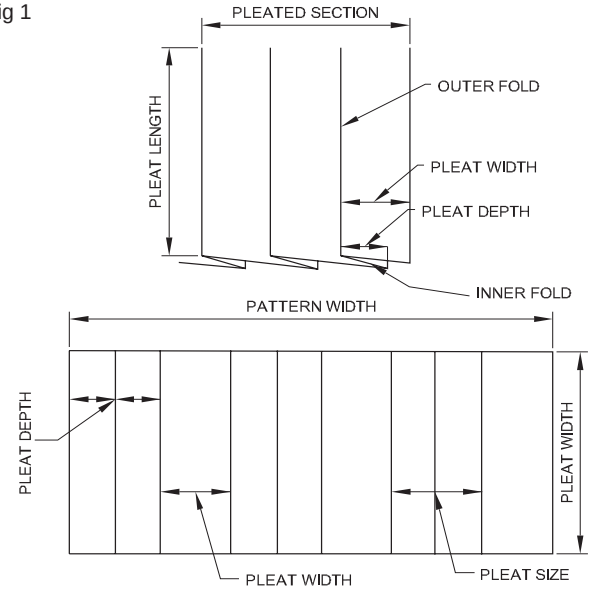
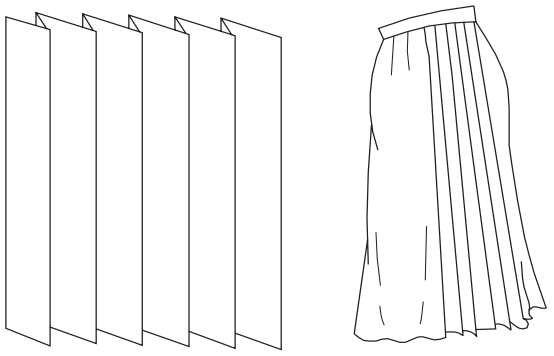


Fig 2



While setting knife pleats there are three possible proportions among pleat depth and pleat width:

– pleat depth = pleat width g normal pleats

– pleat depth < pleat width g shallow pleats

– pleat depth > pleat width g overlapping pleats (Fig 3)

Box pleats are made by two single pleats in opposite direction. A full box pleat is folded under from two sides, so that the inner folds meet. It has two fold lines and two placement lines. (Fig 4)

Fig 3

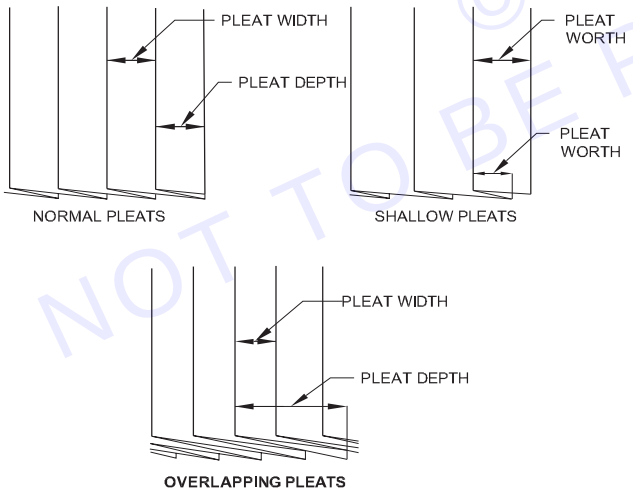
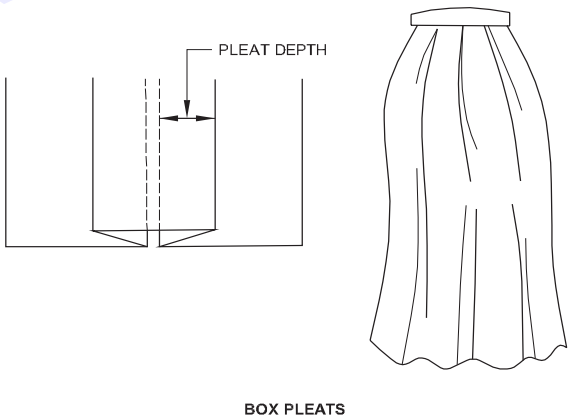


Fig 4



Inverted pleats are also made by two single pleats. They have two fold lines and a single common placement line. The two outer folds in the center of the pleat meet on right side. (Fig 5)

Pleats can be pressed crisply or can be left as unpressed to hang as soft folds. For pressed pleats, garment fabrics that crease easily are the most suitable. Pressing should be done with a pressing cloth.

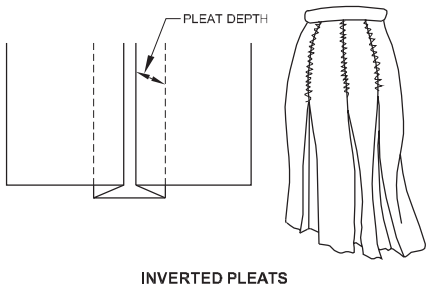
If pleats shall be sharp, use steam or damp cloth to set the creases, then ensure that the pleats dry thoroughly before moving them. During construction of pleats they are pressed before basting stitches are removed.

To hold the pleats in position they can either be edge stitched or topstitched from the waist towards the hip. (Fig 6)

If pleats are formed on a checked fabric it must be taken care that repeats of check are consistent and that folds have appropriate depth to hang satisfactorily (not too deep and not too shallow).

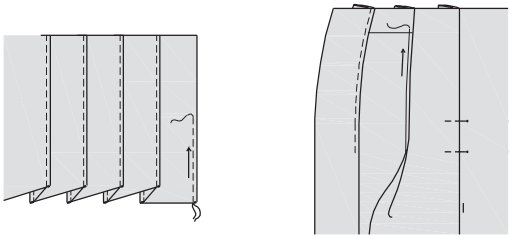
Pleats on checked fabric can be set without drawing construction lines, since the lengthwise check lines can be used as such.

Fig 5



INVERTED PLEATS

Fig 6



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Calculation: Material requirement for pleats

Objectives: At the end of this exercise you shall be able to

- calculate the material requirements for knife pleats, box pleat and inverted pleats.

Knife pleats

Example 1: A pleated section should be of 92 cm width. The pleat depth should be 4 cm and the pleat width should be 5 cm.

a How many shallow pleats should be made?

b What should be the pattern width of the material strip for the pleated section?

c How much material (=length in cm) is required to make the pleated section, if the fabric is of width 90 cm, the length of pleat is 15 cm and 2 cm seam allowance per strip are necessary for each seam?

Solution

a 92 cm : 5 cm = 18.4 (pleats) 18 pleats

92 cm : 18 = 5.11..... = 5.1 cm (corrected pleat width)

Explanation: If the pleated section is divided by the pleat width, it gives the number of pleats.

If the number of pleats so got is not a whole number, it must be rounded off (can be rounded off to the next higher or to the next lower number, at free will). But then - as seen above - the pleat width as originally contemplated, has to be corrected by a fresh calculation.

b 4 cm x 2 = 8 cm (pleat size = material required per pleat)

8 cm x 18 = 144 cm (material required for all pleats size)

144 cm + 92 cm = 236 cm = 2.36 m (material required for all pleats size + width of pleated section)

Explanation: The material required for each pleat is (irrespective of the dimensions) twice the pleat depth. To the material required for all the pleats is added the width of pleated section (= sum of all the pleat widths);

The general rule: pattern width for pleated components = 2 x pleat depth x number of pleats + width of pleated section

c 2.34 m : (0.90 m - 0.02 m) = 2.6... g 3 strips

15 cm x 3 = 45 cm

Explanation: If the pattern width is divided by the width of the material (less the seam allowances), one gets the number of material strips required. The number of strips, if fractional, is always rounded off to the next higher integer, as there can only be a whole number of strips and the material must suffice. In this and in the similar exercises that follow, the pleat lengths include all necessary material allowances.

Example 2: A baby frock is to have a pleat-set at the bottom. The width of the bottom circumference is 50 cm. The knife pleats (normal pleats) should have a depth of 2.5 cm. The seam allowance at the pleated section amounts to 1 cm each on the left and on the right. (Fig 2)

Fig 1

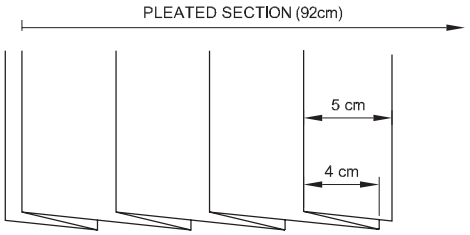
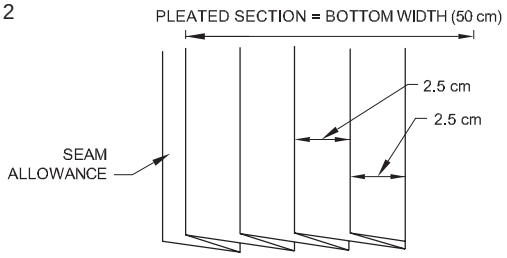


Fig 2



a How many normal pleats should be made?

b What should be the length of the strip of material for the pleated section?

Solution

a 50 cm : 2.5 cm = 20 (pleats)

b 50 cm x 3 = 150 cm (pattern width)

150 cm + 2 cm = 152 cm = 1.52 m

Explanation: Exercise (b) can be solved in accordance with the general rule derived from Example 1. In the case of normal knife pleats, however, there is a simpler procedure: The pattern width is always three times the pleated width, i.e. it is independent of pleat depth and pleat width (because of the triple layer of the material per pleat.

Box pleats: A box pleat consists of two normal knife pleats whose inner folds lie against each other. The pleat width is twice the pleat depth.

Example: A skirt has a box-pleat at the front. The pleated width of the skirt front at the hem should be 60 cm (when the pleat is flat). The pleat depth is to be 12 cm. What should be the pattern width of the front part of the skirt at the bottom (without seam allowance) (Fig 3)

Solution

12 cm x 2 = 24 cm

24 cm x 2 = 48 cm

48 cm + 60 cm = 108 cm = 1.08 m

Pattern width should be 1.08 m.

Inverted pleats: An inverted pleat consists of two normal knife pleats whose outer folds lie against each other. The pleat width is twice as much as the pleat depth.

Example: For comfort, a dress is provided with an inverted pleat at the center back seam. The pleat depth should be 6.5 cm. The pleated section of the back portion at the bottom should be 66 cm (when the pleat is flat). What should be the pattern width of the back portion (without considering allowances) (Fig 4)

Fig 3

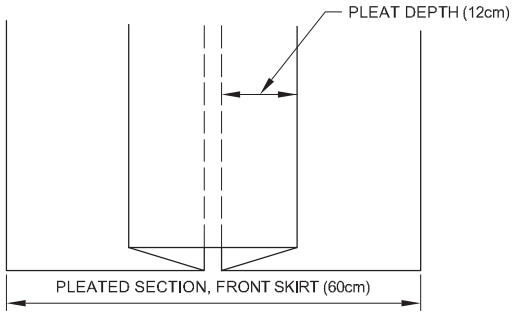
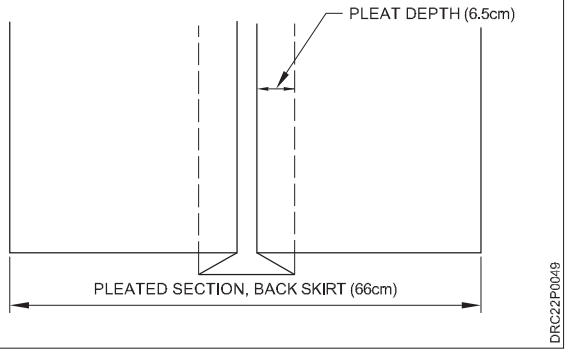


Fig 4



Solution

6.5 cm x 2 = 13 cm

13 cm x 2 = 26 cm

26 cm + 66 cm = 92 cm

The pattern width should be 92 cm.

Exercises

1 Prepare a paper model of

– normal pleats (pleat depth 2 cm).

– shallow pleats (pleat depth 2 cm/pleat width 3 cm)

– overlapping pleats (pleat depth 4 cm/pleat width 1 cm)

2 Calculate the missing values (note: while calculating pleat depth, round off the final result to the next lower integer) (Table 1)

	a	b	c
Pleat depth	3 cm	4.2 cm	4 cm
Pleat width	4 cm	-	4 cm
No. of pleats	?	12	?
Pleated section	80 cm	62 cm	48 cm
Pattern width	?	?	?

3 Calculate the quantity of material (fabric) required for pleated sections ("fabric allowance" in the last row refers to the requirement for seam allowance to join the strips) (Table 2)

	a	b	c	d	e
Pleat Depth	3	4.5	3.5	4.2	2.5
Pleat width	3	5	3	4	4
Pleated section	168	260	144	172.2	124
Pleat length	22	12	10	48	18.5
Width of material	105	90	122	148	130
Seam allowance per strip	1.5	2	3	2.5	2

4 A pleated section of normal pleats has to be made. The pleated section should be 189 cm and the pleat length 15 cm. The material available has a width of 114 cm. A seam allowance of 2.5 cm per strip is required to join the strips. What is the total material requirement?

5 A pleated section should have a width of 15.5 cm. 5 normal pleats are to be set.

a Calculate the pleat depth.

b What should be the pattern width of the material strip for the pleated section?

6 A pattern width of 144.5 cm is available to make a pleated section. What can be the maximum width of the pleated section, if the pleat width should be 3.5 cm and the pleat depth should be 2.5 cm?

7 A strip of material of 120 cm width is made into 8 normal pleats with a pleat depth of 4 cm. What will be the width of the pleated section?

8 A pleated section consisting of normal pleats has a width of 95 cm, the pleat width being 5 cm, what should be the pattern width (ignoring the seam allowances)?

Tucks, Gathers, Shirrings, Frills

Objectives: At the end of this exercise you shall be able to

- name the function of tucks
- name the types of tucks and their features
- explain the construction techniques and stitching aids
- explain the material required for stitching tucks.

A tuck is a straight fold of fabric stitched on the grain evenly throughout the fold. (Fig 1)

It may appear similar to the pleat but some construction features are different. Tucks are stitched to the full length, whereas pleats are stitched on the top in the horizontal direction or only for a short length in vertical direction.

A tuck also has a fold line and a placement line and is stitched parallel to the fold line on its full length. A tuck is constructed similar to the knife pleat, i.e. in one direction (except the cross tucks). The beauty of a tuck depends on it accuracy. It will look good only if the width of tuck and the distance between the tucks are maintained evenly. The tuck width and the spacing between the tucks depends on the desired design effect and the thickness of the fabric. Special design effects can be achieved by setting the tucks group wise.

Tucks are used mainly for decorative purpose. In some cases they are used for shaping the garment to the body (similar function as the dart) or used in children´s dresses to provide some allowance for growth. In some rare cases tucks are used to conceal joints in a garment when they are altered. The joint will appear on the wrong side of the garment while the decorative tuck will be visible from the right side.

Generally tucks are folded on the right side of the garment since they have decorative purpose. Only dart tucks used for shaping are folded on the wrong side for shaping.

Types of tucks:

There are types of tucks -

1 Pin tucks - When the fold is very narrow, they are called Pin Tucks.

2 Spaced tucks -Spaced tucks are folds of cloth sewn at regular intervals.

3 Blind Tucks - Blind tucks are sewn so close together that the rows of stitching do not show on the outside. Each tuck overlaps the next covering, the previous row of stitching.

4 Shell Tucks - Narrow tuck with shell like scallop edge is called scallop tucks.

5 Corded Tuck - When a cord is placed inside the fold, is called corded tuck.

6 Released Tuck - When tuck stitching started from a point and end somewhere in middle called released tuck. This is to control small amount of fullness.

Tuck is a fold or pleat in fabric that is sewn in place.

Plain tucks are formed in one direction. Width of tucks and the spacing can vary with the desired effect. If the space given between the tucks is equal to the depth of tuck, i.e. the fold of the tuck touches the stitching line of the previous one, they are called blind tucks. **Blind tucks** can be regarded as a variation of plain tucks. Another variation of plain tucks are the **pin tucks.** As the name implies they are of very narrow width, almost equal to a pinhead. Only thin fabrics are suitable for pin tucks. (Fig 2)

Fig 1

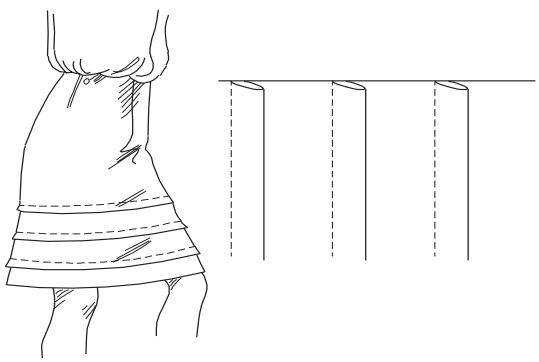
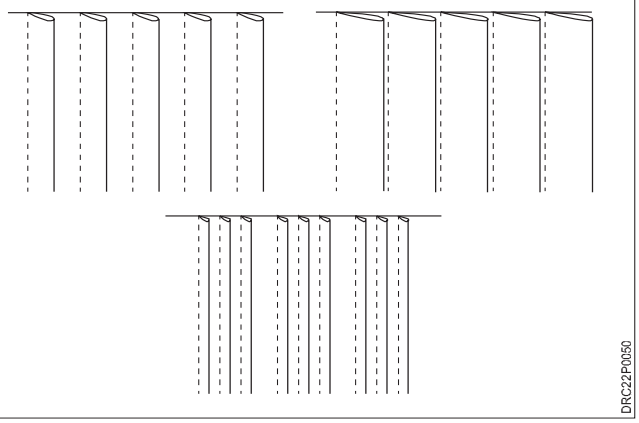


Fig 2



Cross tucks are stitched in both directions, vertical and horizontal. The lengthwise tucks are stitched first, then pressed in one direction before the widthwise tucks are stitched. (Fig 3)

A tuck can be given a special decorative effect by making it into a **shell tuck.** This tuck has a scalloped edge. They can be formed on single edge or as multiple rows. Thin and medium weight fabrics are best suited for that purose. (Fig 4)

Fig 3

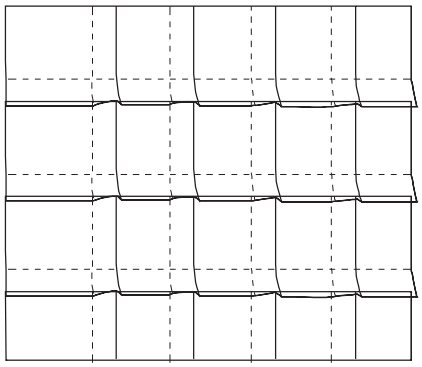
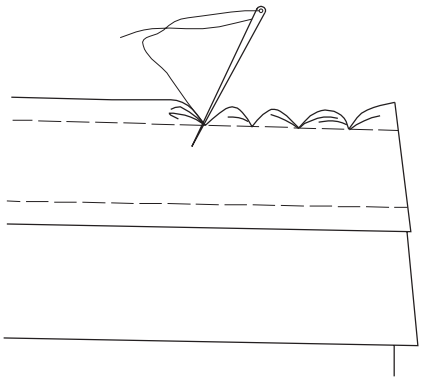


Fig 4



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A group of blind tucks can be made to show a **scalloped effect.** For that purpose the fold of tucks should be a little wider. The tucks are top stitched perpendicular to the tucks first in one direction, then their folds are placed in the opposite direction to be topstitched again perpendicular to the tucks. This process is repeated on the full length of tucks at regular intervals. Thin and medium weight fabrics are best suited for shell tucks and scalloped tucks. (Fig 5)

Corded tucks are made by placing a cord inside the fold. This makes the tuck more prominent. A zipper foot is required for stitching this type of tuck. (Fig 6)

Fig 5

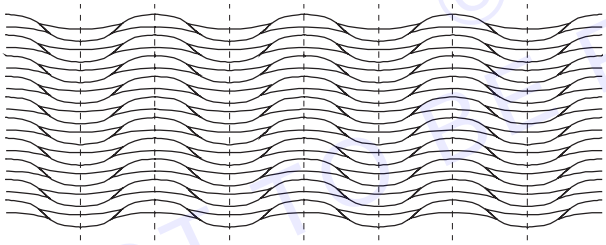
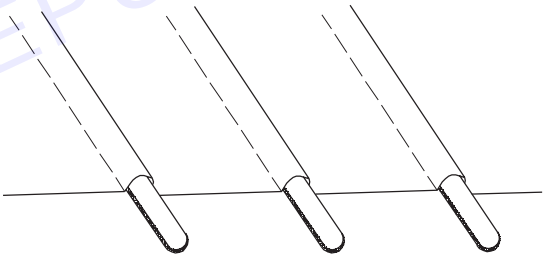


Fig 6



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When tucks are used as a symmetrical element of decoration on the garment, the fold lines of either side should either face centre front or they should be directed away from the centre.

Dart tucks are used for shaping the garment. They can be formed on shoulder line, front and back waistline of the bodice and the front and back section of the lower garment. They are used to provide fullness and are usually formed on the wrong side of the garment. In rare cases they are formed on right side for decorative effect. (Fig 7)

The difference between darts and dart tucks can be described as follows:

– Dart tucks are of less width (approx. 0.5 cm).

– To achieve the desired shape they are stitched in groups of 3 or 4.

– Dart tucks are of equal width on the full length while darts taper towards the end.

While stitching tucks some tools are useful:

A gauge made from cardboard helps stitching without marking the stitching lines. The length of gauge includes the width of tuck and the space between the tucks. The notch indicates the width of tuck. If the gauge is placed with the left edge on the stitching line of the previous tuck and the right edge is on the fold of the new tuck the notch will indicate the position of the stitching line for the new tuck. (Fig 8)

Fig 7

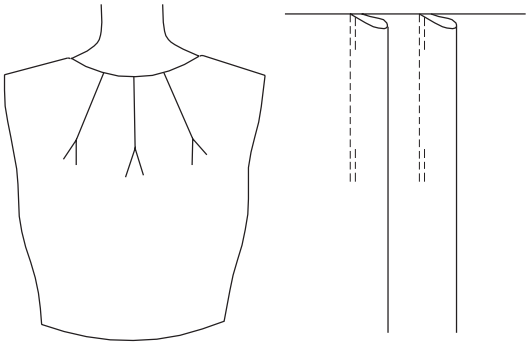
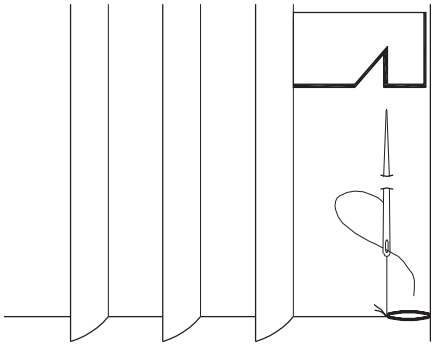


Fig 8



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Tucker foot is a time saving device for making tucks up to 2.5 cm in width. It is an extra attachment inserted in place of the presser foot for treadle and motorized sewing machine. It helps to achieve an equal width of tucks and equal spacing between the tucks in one operation. The tucker foot is provided with two scales numbered from 0 to 8. The smaller scale near the needle will help to get a uniform width of tuck. The required width of tuck is set by moving a sliding plate with the help of a screw. While stitching, the fabric is guided between the two scales.

There is another screw near the needle to regulate the space between the tucks. Set the tuck scale first for the width of tuck, then the space scale is adjusted to a required space. The tucker foot does two operations at a time: it maintains the tuck width and the distance between the tucks even. (Fig 9)

An edge stitches is a special presser foot which is inserted in the machine in place of the normal presser foot. It is useful as a guide for stitching pin tucks, tucks with lace, piped seams and for self enclosed seams (e.g. French seam). It has a series of slotted guides where the folded fabric is inserted. The slots are of different widths for different edge stitch distance. (Fig 10)

Fig 9

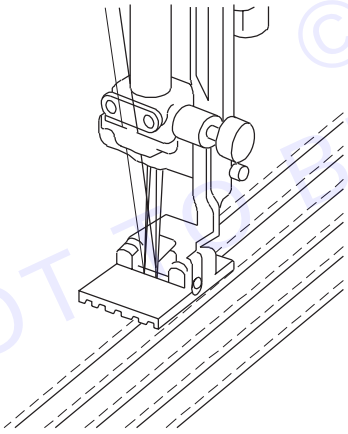
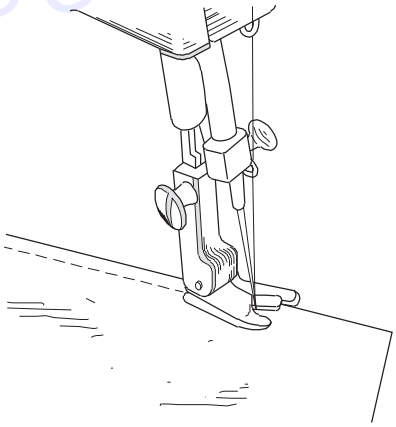


Fig 10



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Tucks can be formed before or after the respective component of the garment is cut from the fabric.
The easier way is to fold the tucks before layout. The disadvantage with this method is that the edges have to be recut. It also increases the wastage of fabric. (Fig 11)

With the other method the pattern is slashed and spread. This provides the extra space for folding the tucks after the component is cut. (Fig 12)

Fig 11

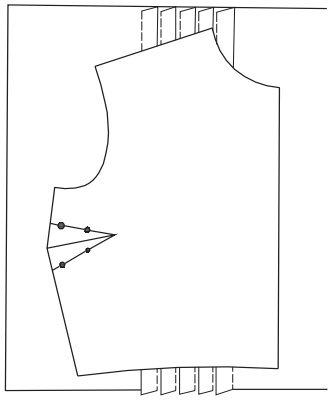
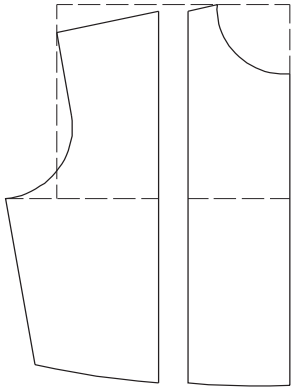


Fig 12



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Calculate the material requirement for tucks

Objectives: At the end of this exercise you will be able to

- calculate the material requirement for stitching tucks.

The following terms and measurements are important for the calculation of tucks: Example 1: A tucked component shall be of 39 cm tucked width while the gap between the tucks is of 1.2 cm. How many tucks are to be stitched, if the first and the last tuck is 1.5 cm away from the edge?

Solution

39 cm – (2 x 1.5 cm) = 36 cm

(distance between the first and the last tuck)

36 cm : 1.2 cm = 30 (gaps)

30 (gaps) + 1 = 31 (tucks)

The fundamentals for the calculation of tucks are similar to those for the calculation of buttons.

Example 2: A tucked component of 28 cm tucked width shall be prepared. There shall be a gap of 1.5 cm between the tucks and the tucks shall be of 2 mm width. The first and the last tuck shall be 2 cm away from the edges. What is to be the pattern width for the respective tucked component?

Solution

2 mm x 2 = 4 mm (material requirements for each tuck)

28 cm – (2 x 2 cm) = 24 cm (distance between the first and the last tuck)

24 cm : 1.7 cm = 14.1 ... (gaps) 15 gaps

15 (gaps) + 1 = 16 (tucks)

4 mm x 16 = 64 mm = 6.4 cm (for all tucks)

28 cm + 6.4 cm = 34.4 cm (pattern width)

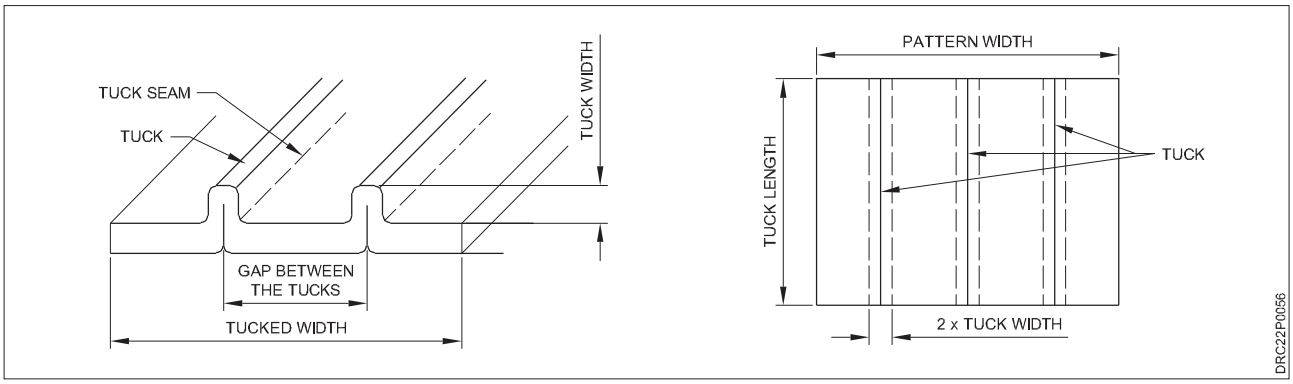
24 cm : 15 = 1.6 cm (corrected gap between the tucks)

Explanation: If the number of gaps between the tucks so got is not a whole number, it must be rounded off (can be rounded off to the next higher or to the next lower number). But then – as seen above – the gap between the tucks as originally contemplated, has to be corrected by a fresh calculation.

Exercises

1 Calculate the number of tucks

Tucked width		Gap between the tucks	Distance of outer tucks from the edge
a	44 cm	2 cm	2 cm
b	24 cm	1.5 cm	1.5 cm



	Tucked width	No. of tucks	Gap between the tucks	Tuck width	Distance between tuck and left edge	Distance between tuck and right edge	Pattern width
a	30 cm	?	3 cm	1 mm	1.5 cm	1.5 cm	?
b	42.5 cm	?	1.5 cm	1.5 mm	2 cm	3 cm	?
c	28 cm	?	1.5 cm	1.2 mm	3 cm	3 cm	?

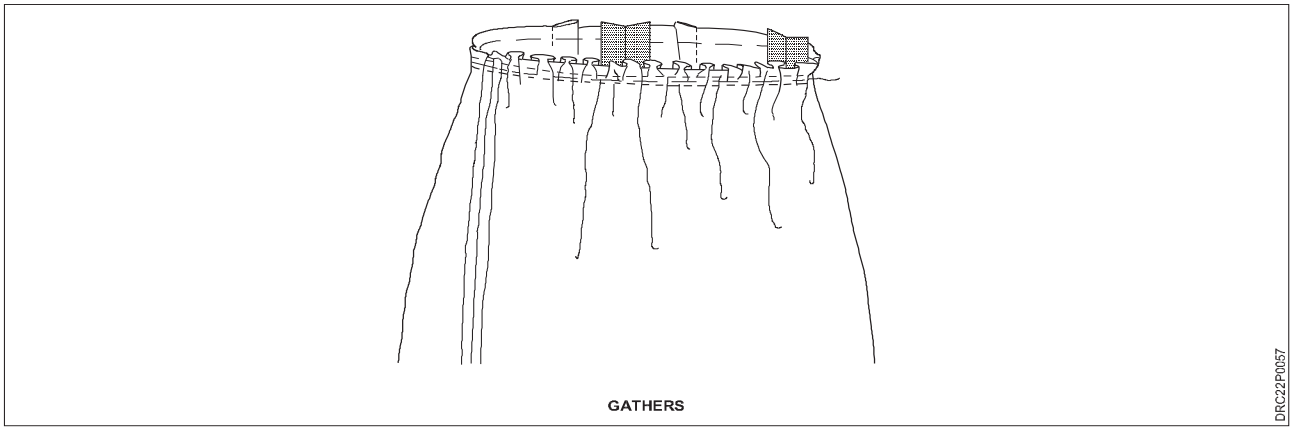
Gathers and Shirrings

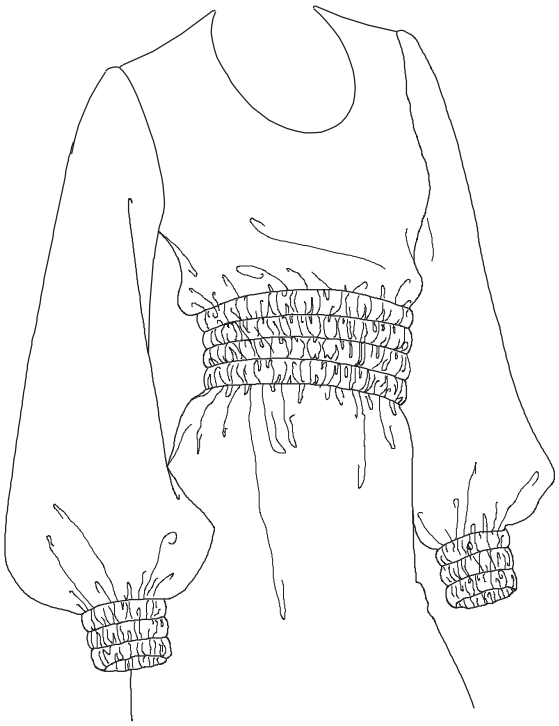
Objectives: At the end of this exercise you shall be able to

- state the features of gathers
- explain the importance of shirring.

Gathers: Gathers are more popular method for controlling fullness in a garment. Gathering is one or two rows of stitching drawn up to form very tiny pleats in the fabric. It is important that the fullness must distributed evenly through out the entire area. If the fabric is very wide for gathering, work the gathering stitches in batches to prevent the thread snapping as it is pulled up. The gathered section of a piece of fabric often looks completely different from the actual fabric. Fabric is usually gathered to one-half (½) to one-third (1/3) the original width. The effect of gather may be soft and draped, or crisp and billowy depending on the fabric. Gathers is done after construction seam have been stitched, seam finished and pressed. Gathering most often occurs in a garment at waist line, cuffs, yokes and children clothes etc.

Shirring: Shirring is the most popular method of controlling fullness in a garment. Gathering is one or two rows of stitching drawn up to form very tiny pleats in the fabric, but shirring is more than three rows of gathers. In shirring the fullness is distributed evenly through the entire area. It is primarily a decorative way of controlling fullness. Shirring by machine is the easiest and quickest method than by hand. Shirring is formed with multiple row of gathering. Light weight fabric are most appropriate for shirring; they may be either crisp or soft voiles, crepes and jerseys are excellent choicer. Non iron fabrics are good because it is difficult to press shirring without flattening. Rows of shirring must be straight, parallel and equidistant. Pressing done with tip of iron directly into the fullness.





SHIRRED MIDRIFF AND CUFFS DRAMATIZE A PLAIN DRESS

DRC22P0058

Frills and Ruffles

Objectives: At the end of this exercise you shall be able to

- **explain frills and ruffles.**

Frills are used for the purpose of decorating a garment. They can be used on hem lines, necklines and at any portion of the garment as per taste. The width of the frill may 1" to 3" and length should be cut as per the required amount of gathering. The length side should be cut along the warp way of the fabric. The gathered edge of the frill can be concealed in a seam. Frills can be constructed in a double layers and in circular shape. If the width of the frills are more than required then they are called as "Flounces".

Calculate the material requirements for frills

Objectives: At the end of this lesson you shall be able to

- calculate the material required for frills of different length and width.

Terms and measurements which are important for the calculation of frills can be seen from the graphic:

Example: A frill of 1.80 m/1 m frilled width is required. The pattern width shall be frilled to 1/3 of its length.

a What is the measurement of the pattern width (length of the strip of material for the frill)?

b What is the material requirement under the following conditions?

Width of fabric : 1.10 m

Length of frill: 12 cm

Additional material for hem and allowance to join the frill to the garment: 3 cm

Solution

a 1.80 x 3 = 5.40 m

b 12 cm + 3 cm = 15 cm
5.40 m : 1.10 = 4.9 (5 strips)
15 cm x 5 = 75 cm

Since the number of strips is got only by rounding off to a full (whole) number the balance material generally is sufficient for the seam allowances which are required for joining the strips. If the number of strips is calculated as a full (whole) number or close to a whole number an additional strips would have to be calculated for the seam allowances.

In practice some material is saved while the material is frilled with less density. This is the reason why seam allowances for joining the strips are not calculated separately in the example above and also in the following exercises.

Exercises

1 Calculate the material requirements for frilled components („seam allowance" in the last column is meant for the hem of frill and for joining the frill to the garment).

2 A pattern width of 9.40 m is required for a frilled component. The width of fabric is 1.19 m. The length of frill shall be 7.5 cm; 2 cm are required for hem and joining the frill to the garment. How many cm of fabric are required for the frilled component?

3 A frill shall be attached to the hem of a skirt. For this a frilled component of 1.60 m frilled width is required. The pattern width is reduced to 2/5 of its length. What is the length of the strip of material?

Pattern width		Width of fabric	Length of frill	Fabric allowence
a	440 cm	0.98 m	12.5 cm	2.5 cm
b	210 cm	1.20 m	8 cm	3 cm

Hems

Objectives: At the end of this exercise you shall be able to
- explain about hems and types of hems.

A hem is a finish for any bottom edge of a garment. There are three basic forms - a turned up edge (the most common), a faced edge and an enclosed edge. Although all are dealt with here as hem treatments any of them might be used for other edges as well.

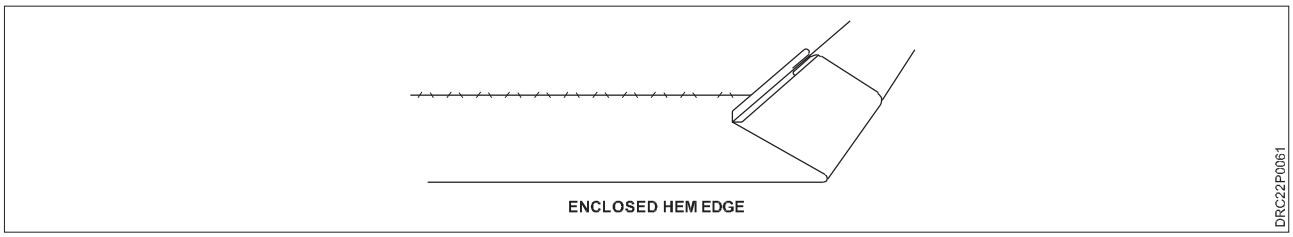
Selection of a hemming method depends largely on garment style and fabric. Whatever the choice, certain criteria should always be met

Selection of a hemming method depends largely on garment style and fabric. Whatever the choice, certain criteries should always be met:

1 The garment should hang evenly and gracefully.

2 There should be no lumpiness in the hem allowance.

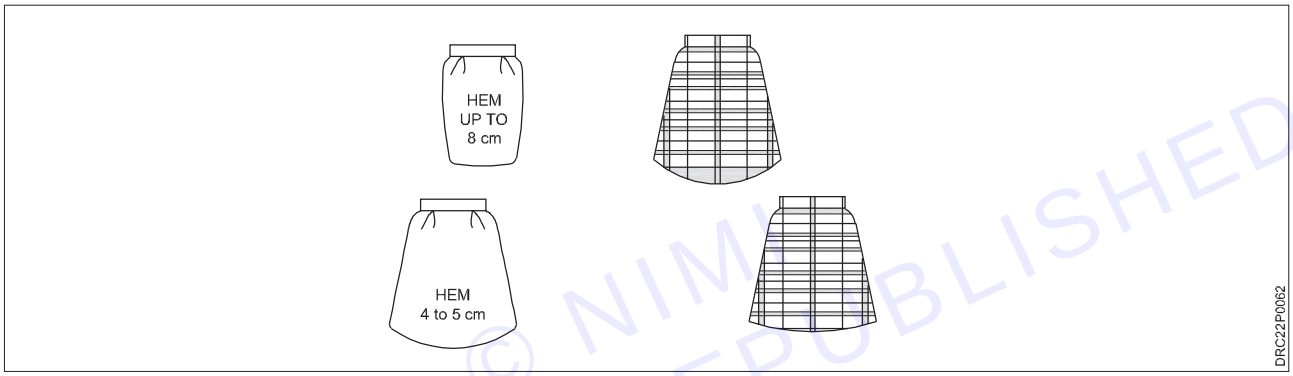
3 Unless meant to be decorative, finished hems should be totally inconspicuous.



Turning up the hem edge

In a turned-up hem, a certain width of fabric, the hem allowance, is folded inside the garment, then secured by hand, machine or fusing. This is the hem type usually provided for in pattern designs, with the amount of turn-up indicated on the pattern by a line or written instructions. It is wise to check this allowance before cutting out the garment, should a change be desirable.

The hem's shape, straight or curved, generally determines how much should be turned up. As a rule, the straighter the edge, the deeper the hem allowance; the more it curves, the shallower the allowance. Exceptions are sheer fabrics, in which a very deep or a narrow rolled hem may be preferable and soft knits. Where a narrow turn-up will minimize sagging.



Hem allowance varies according to garment shape up to 8 cm is usually allowed for a straight garment 4 to 5 cm for a flared one. Fabric weight should also be considered.

A hem line may look distorted if the hem curve is too extreme for, or does not align with, the fabric design. A slight adjustment may be necessary, for a better effect.

Sewing hem by hand

Before a hem is secured by hand, the raw edge should be neatly finished. The finish chosen depends first on fabric characteristics and garment style, second on personal preference. The edge can be left uncovered on fabric that does not fray, also where a lining will cover the hem; use a covered edge for fabric that frays a great deal, and in those situations where a more finished look is wanted.

There are two basic hand hemming methods - flat where stitches pass over the hem edge to the garment and blind where the stitches are taken inside between hem and garment. Blind hems are best for heavier fabrics and knits because the hem edge is not pressed into the garment.

Sewing a hem by machine

The major assets of machine hems are speed and extra sturdiness. They can also provide a decorative touch and are especially appropriate if top stitching is part of the design machine stitches are more apparent on a hem than hand stitches. Of the several methods, the blind stitched hem is the least conspicuous because only about every sixth stitch catches the right side of the fabric. For blind stitching a hem on a knit or on fabric that does not fray. For fabric that frays, see the method below.

Use machine hems only on garments where easily seen stitches do not detract from the overall appearance. Take special care with all types of machine stitched hems to keep stitching on even distance from the hem line.

Faced hems

In a faced hem most of the hem allowance is eliminated; a band of light weight fabric is then stitched to the hem and turned inside so it does not show. There are two basic facing forms - shaped (cut with grain lines and shape conforming to the hem) and bias (cut as a bias strip, then shaped to fit). You can buy bias hem facing ready made in various colours.

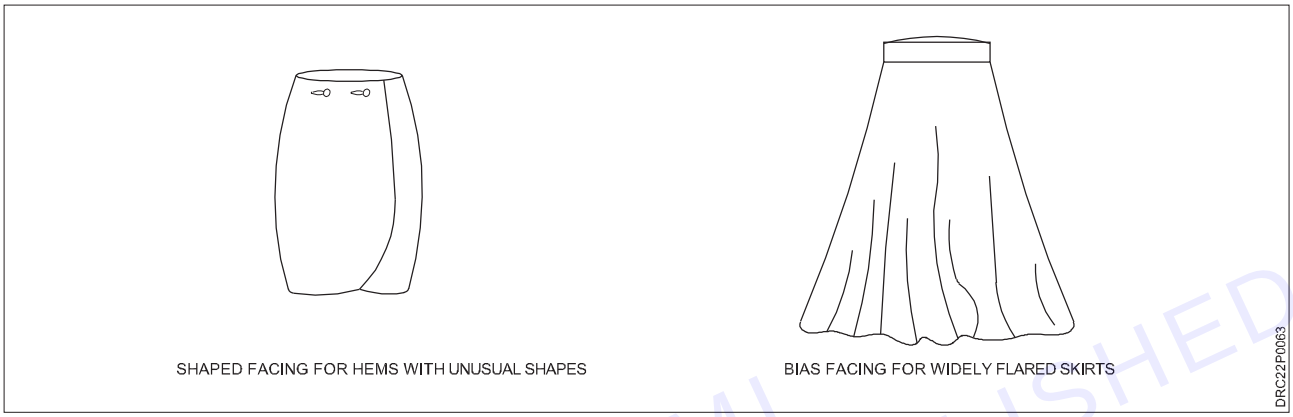
A shaped facing is applied as a rule, where a hem shape is unusual, as in the wrap skirt, right. Its use is limited to a hem with minimal flare.

A bias hem facing is ideal for a widely flared hem, especially when the garment itself is cut on the bias. It is recommended in place of a turned-up hem when (1) there is not enough hem allowance to turn up; (2) the fabric is exceptionally bulky; (3) a skirt is circular in style.

Banding

Banding is an extension of a garment edge. It can be cut the same shape as the edge or on the bias. The latter is the usual approach for a hem as it is ideal for adding length.

To prepare the hem for banding mark the hem line at the desired length measure up from the hem line a distance equal to finished banding width; mark a new line and trim all but 6 mm of fabric below it.



Corners

Objectives: At the end of this exercise you shall be able to

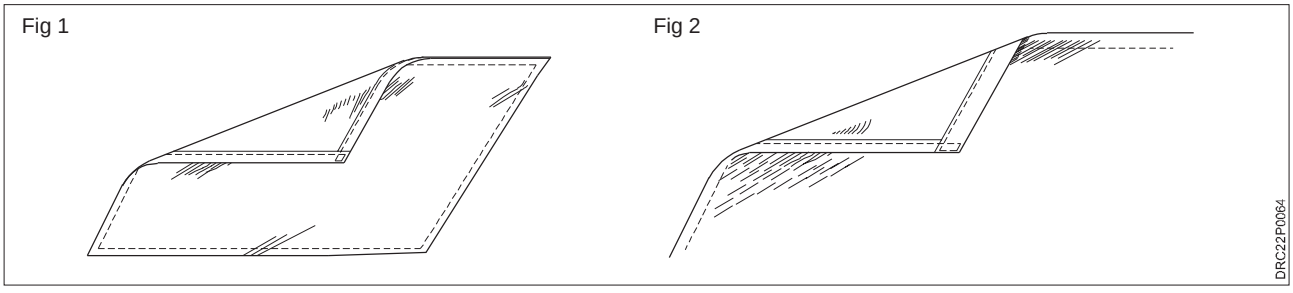
- describe the types of corners and their features.

Corners are formed where two edges meet. The meeting place of corners has more layers. They are finished in different methods.

Overlapping corners are slightly bulky, therefore constructed in light weight fabrics used for napkins, table cloths, towels, handkerchiefs, bed covers etc. and also on the hem of dresses with full open front.

Variations of overlapping corners: When the hems on both the edges (lengthwise and widthwise hem) have folds of equal size, we get a **square corner**. Reducing bulk at the corners of a heavy fabric, can be made by cutting away a rectangular piece on the underlay. (Fig 1)

If one hem width is wider than the other side, then the finished corner will form a small rectangle. (Fig 2)



The diagonal joining of two edges at the corner is called **mitring**. The joint may be stitched or folded in place. Only an accurate folding will help you to get a good mitring. To reduce the bulk of the material on the under side, the joint is cut diagonally and pressed open. **Mitred corners** can be finished in two directions, when the mitred piece goes around the corner, it is an outward corner (used in table cloth, pillow cover, bed cover, etc.). If the piece lies within the corner then it is an inward corner (used in neck line) (Fig 3)

Variations of a mitred corner: Self-turned-up corners are worked mainly on the wrong side of the material. The main material is turned to the wrong side and folded in place; This type of corner always forms an outward corner. (Fig 4)

Fig 3

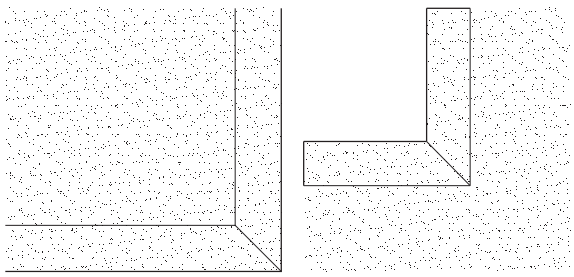
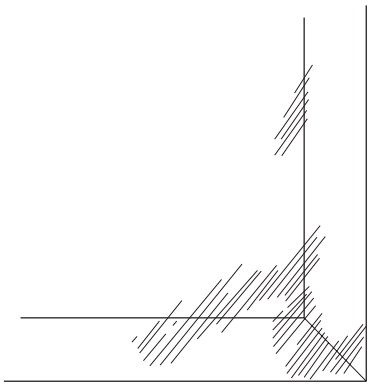


Fig 4



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See the other methods of mitring which are explained below to use a separate strip or band to form the corners. They all can be finished as inward or outward corners.

Mitring with flat tape or ribbon is done mainly to create a decorative effect on the right side. The size of the garment material remains the same. (Fig 5)

Mitring with banding always extends the size of a garment (material). It is used to give a decorative effect as a border or it is used for alteration of length etc., e.g. in children's garments. The banding is always finished on a double layer. (Fig 6)

Fig 5

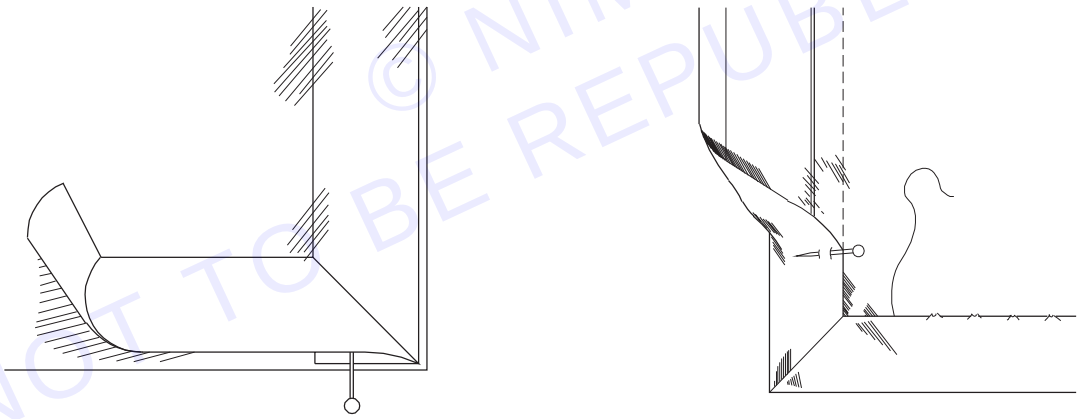

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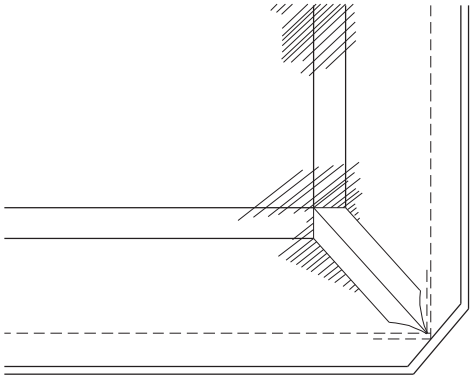
Fig 6



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Casing, neck lines and edge finishing

Objectives: At the end of this exercise you shall be able to

- define casing
- explain types of casing.

A casing is a fabric tunnel through which elastic or a drawstring can be threaded to pull in or draw up the fabric. Casing can be used at sleeves and pants hems as well as for garment waist bands. The most common use of casings is for waist bands on pull on pants and skirts, pajamas. This is best suited for straight edges. Waistline casings are practical because they can be adjusted easily to change in waist measurement - merely tighten or loosen the drawstring or elastic.

A casing should 6 cm wider than the elastic (or drawstring) so the elastic or drawstring can move easily through the tunnel, but not so loose that it twists easily.

There are two types of casing

a Fold down casing

b Applied casing

Fold down casing

A fold down casing is formed by turning an extension at the garment edge to the inside and stitching it in place. Fold down casing are of three type

1 Casing with drawstring - Used in Petticoat, pull on pyjamas

2 Casing with elastic - Used in baby garments, pants etc.

Applied casing

An applied casing consists of a separate strip of fabric that is stitched to the area to be drawn up on either the outside or the inside of the garment. If the casing is inside but the drawstring is required outside, provision is to be made to lead the drawstring outside. This can be done with button hole or with opening in the seam. An applied casing may be sewn on a one piece garment that has no waistline seam.

A casing sewn from inside may be of light weight lining fabric or a readymade bias binding to reduce unnecessary bulk. The applied casing also act as facing for a top edge of pants and skirts and the lower edge of blouses and jackets. Applied casing from outside may have of same colour and material or of contrast colour fabric.

3 Inside applied casing - Used in the waist line of jackets/ dresses/ pants etc.

4 Outside applied casing - Used in the waist line of jackets/ dresses/ pants etc.

Casing with heading can be formed on either type of casing having free edge. This is done after making a tunnel, stitch a second row of after the desired depth of the casing. When the casing is drawn up it will gather the heading automatically.

Safety precautions

1 Lines should be parallel to grain.

2 Elastic may not twist inside the casing.

3 Back/ secure stitch should be there to secure the open ends.

4 Always remove the tacking before finishing.

Neck lines and edge finishing

Objectives : At the end of this exercise you shall be able to

- explain the different types of neck designs
- name the different methods of finishing raw edges
- describe the main difference in facing, banding and binding and their suitable application
- explain the required materials for bias piece.

The design of the neckline generally is given importance, since it will influence the style of the garment and it should suit the person wearing the garment. Neck lines must be finished with special accuracy since they attract the attention easily.

All neck designs can be regarded as variations of three main shapes: round, square and V-shaped. (Fig 1)

If the plain shape shall be high lightened no decorative elements like frills etc. are attached. Instead the neckline is finished by a facing piece which is invisible from right side.

There are different methods of finishing a raw edge in a garment, as on bottom, arm-hole, neckline etc. Beside hemming, that is turning up the raw edge on the wrong side of the garment, there are two more methods of edge finishing which are **facing and enclosing of edges.**

The material used for facing and enclosing of edges can be cut on the straight grain or on the bias, i.e. at a 45°angle (diagonal) to the warp and weft.

Bias is mainly used on curved areas to ensure that the material can be stretched.

Facing is the method where a piece of fabric is used to finish the raw edge on wrong side of the garment. Facing can be done as bias facing or shaped facing.

Bias facing is applied on a curved edge and done with the help of a strip. (Fig 2)

Fig 1

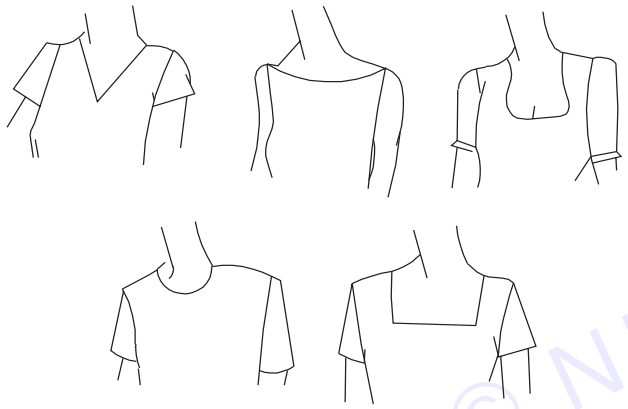
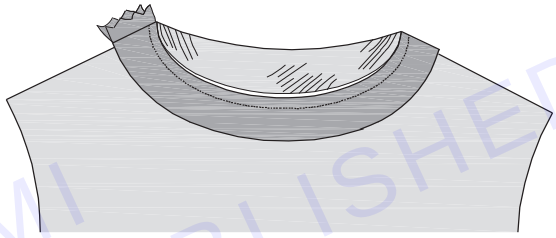


Fig 2



BIAS FACING

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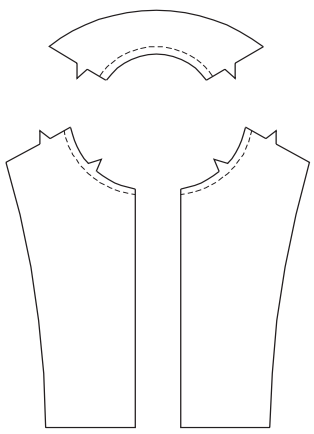
It is usually turned to the wrong side of the garment and will not be visible from right side. It is only turned to the right side if a decorative effect is desired. When bias facing is applied on inward curves it should be eased while stitching (easing means holding bias strip slightly loose at the seam line) and for outward curves it must be notched for stretching (since the circumference increases). It is mainly applied on the neckline, armhole and on hemline in skirts or sleeves.

Shaped facing can be of any width. It is cut to the exact shape of the garment edge to which it is to be applied, usually it is cut on the same grain as the section of the garment it faces. It is often used to finish square or V necklines. It is easier to apply than bias facing and is less conspicuous. It is usually cut separately for front and back. It can also be used on armhole (sleeveless). Here the facing must be matching with the wrong side of garment, so that it will be right side out when finished. (Fig 3)

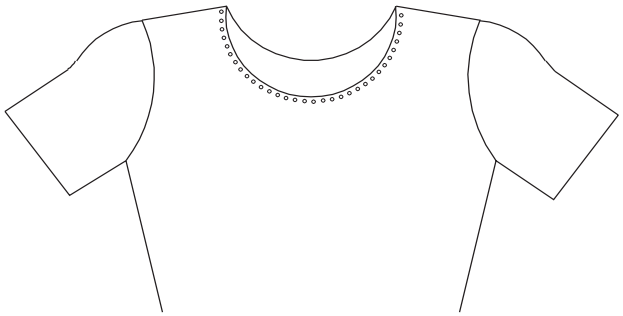
A topstitch is very close to the neck shape line from right side is a must. This ensures that the facing stays flat on the neck shape. (Fig 4)

Fig 3



FRONT FACING

Fig 4



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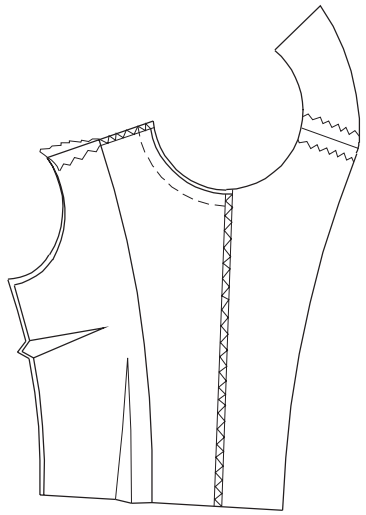
Expanded facing: If the facing piece is cut as an extension of the garment (e.g. on front opening) it is called extended facing. (Fig 5)

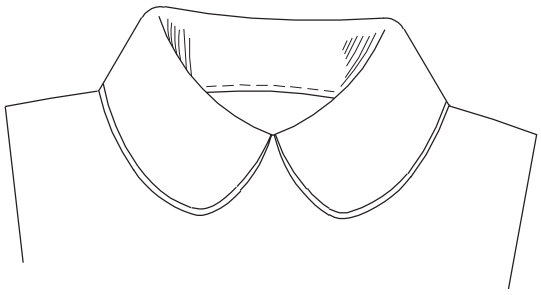
Piping is a method for a decorative edge finishing. It is cut from the bias material. The pipe is stitched between the two layers of fabric to, form a flat welt on the edge. The pipe can also be filled with a cord to make the welt stronger and more conspicuous. (Fig 6)

Fig 5



EXTENDED FACING

Fig 6



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Enclosing of edges: This type of edge finishing can be done with straight or bias material.

Binding is used to finish and straighten raw edges or to add a decorative trim to a garment. It is a neat finish also for reversible garments. It is used to finish necklines, armholes, sleeve edges, front closings, collars, cuffs and seams. Ready made bias binding piece can also be used. (Fig 7)

Bias bindings can be applied in two ways: Single binding is cut to double the finished width plus two seam allowances. Bindings are handled in the opposite manner to facings at Inward and outward curves. Stretch bias on inward curves and eases it in outward curve Double binding or French binding is used on sheer fabrics. Here the width is four to six times the required width. The binding piece is folded first and applied to the garment. It gives a corded effect when finished.

Banding is an extension of a garment on the raw edge for example hemline and neckline. The width of banding can vary according to the desired length. When used on hemline it is cut on the same grain. A contrasting material can also be used. When applying bias piece as banding on curved shapes, only a narrow width is used. (Fig 8)

Fig 7

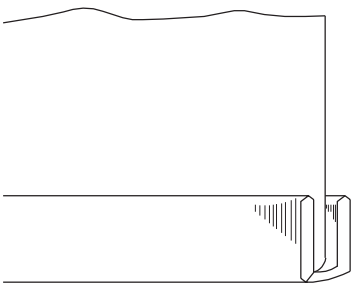
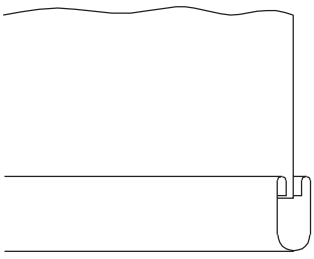


Fig 8



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The following factors are to be considered while finishing necklines.

The design of facings and collars should harmonize well with the fabric design, i.e. big and bold floral designs, checks or stripes are not suitable.

When designing the neckline, the purpose of the dress is important. For casual wear and uniforms prominent decorative features are avoided.

While selecting the shape of the neckline the individual features of the wearer must be taken into consideration; the following combinations are suitable:

- Round face - long pointed collar or V-neck
- Thin and long necks - standing collar or close neck
- Broad face and short neck - long pointed collar or wider neck shapes
- Long slender face - short collar points and broad spacing between the points or close neck.

Important hints to avoid trouble while stitching: To avoid bulge on the edge or comer of the neckline notches should be given on inward curves.

To avoid bulge on the neckline edge of right side facing top stitching must be done on the right side close to the neckline and the shoulder seam allowance should be pressed open.

On square and V-shaped necklines clipping should be done at the corners or at points. This is to avoid bulging and to prepare for a flat set.

If a narrow facing is used it is hemmed to bodice fabric. Be careful to catch only one thread from the garment section and don't pull the thread tight. Otherwise stitches are visible from the right side.

Materials requirements for bias strips

A bias strip is a strip of material which is cut diagonally to the warp and weft yarns. Since it is very stretchable and suitable to finish edges.

The shape of the material required for cutting a single bias strip is always a square.

s = length of edge of square material

s = s1 + s2

s1 = lateral side of the isosceles right-angle triangle D1, in which the length of the bias strip functions as the hypotenuse

s2 = lateral side of the isosceles right-angle triangle D2, in which the width of the bias strip functions as the hypotenuse.

From the theorem of Pythagoras it can be deduced, that the hypotenuse of the isosceles right-angle triangle is 1.4 times of the appropriate lateral sides.

Length of bias strip = s1 x 1.4

Width of the bias strip = s2x1.4

Side length of the square s = (length of strip x 1.4) + (width of strip x 1.4)

Example 1

A bias strip of 20 cm length and 2 cm width is required. What is the side length of the appropriate square piece of fabric if the strip is cut on the true bias?

Answer:

20 cm: 1.4 = 14.28 cm (length of the lateral side s1)

2 cm : 1.4 = 1.42 cm (length of the lateral side s2)

14.28 cm + 1.42 cm = 15.7 cm

The side length of the square of fabric has to be 15.7 cm.

Explanation

If the length of strip is 1.4 times the length of the lateral side of triangle, then vice versa the length of the lateral side of triangle is the 1.4th part of the length of strip.

Example 2

A square piece of fabric with 65 cm side length is available to cut a 3 cm wide bias strip. What is the length of the bias strip if it is cut on the true bias?

Answer

3 cm: 1.4 = 2.14 cm (length of lateral side s2)

65 cm - 2.14 = 62.86 cm (length of lateral side s1)

62.86 cm x 1.4 = 88 cm

The length of bias strip will be 88 cm.

Joined bias strips

If the bias strips might be joined the layout will become much more economical. The strips can be laid out side by side. The shape of the fabric will be rectangular. (Fig 9)

Example 1

A bias strip of 5 m length and 2.5 cm width is required. The shortest strip shall be of 10 cm minimum. The fabric available is of 86 cm width. How much material is required?

Answer:

500 cm x 2.5 cm	=	1250 cm (surface of the strips)
10 cm : 1.4 cm	=	7.14 cm " 7.1 cm (lateral side of balance triangle)
7.1 m x 7.1 cm	=	50.41 cm2 (surface of both balance triangles)
1250 cm2 + 50.41 cm2	=	1300.41 cm2 (surface of the fabric)
1300.41 cm2:86 cm	=	15.12 cm m 15.5 cm (rounded to the next higher)

Explanation: The total surface of the fabric is calculated by adding the balance material to the surface for the strips. The length of the piece of fabric is calculated by dividing the total surface into the width of fabric.

The result should always be rounded to the next higher number. Why?

Example 2

A piece of fabric of 96 cm width and 20 cm length is available. What is the length of a joined bias strip of 2 cm width? The minimum length of the single strip shall be 10 cm.

96 cm x 20 cm	=	1920 cm2 (surface of the fabric)
10 cm x 1.4	=	7.14 as 7.1 cm (lateral side of the balance triangle)
7.1 cm x7.1 cm	=	50.41 cm2 (surface of both balance triangles)
1920 cm2-50.41 cm2	=	1869.59 cm2 (surface of the strips)
1869.59 cm2:2 cm	=	934.79 9.34 m (rounded to the next lower)

Explanation: The calculated surface of the bias strips can be projected as a rectangle of 2 cm width and an unknown length. The length of strip is calculated by dividing the surface of strips into the width of strips.

The result should always be rounded to the next lower number. Why?

Exercises

I. Calculate the missing values for single strips.

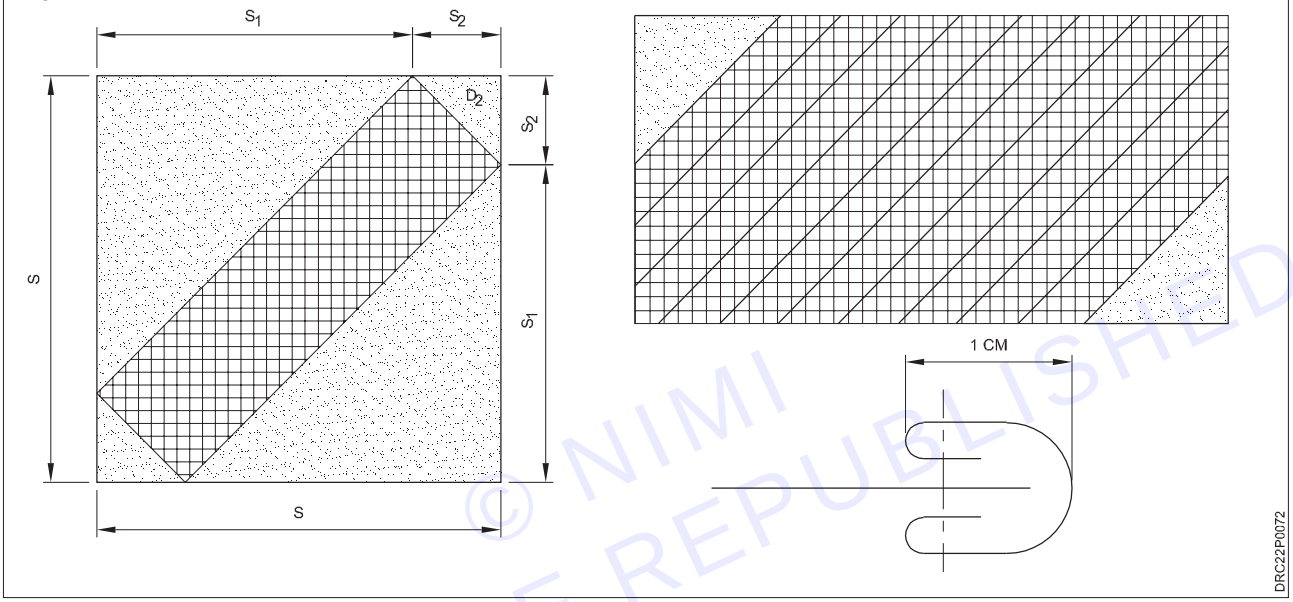
II Calculate the missing values for joined strips!

III Several edges of a dress shall be finished with bias binding. The single stretches of edges are 62 cm, 2 x 45 cm, 2 x 35 cm, 2 x 40 cm. Seam allowance regarding width of strip is 0.5 cm for each edge. Seam allowance for joining the strips will be 9 cm in total. What quantity of material is required if the width of fabric is 0.72 m? The minimum length of the single strip shall be 10 cm.

Length of strip	Width of strip square fabric	Side length of
a 20 cm	2.5 cm	?
b ?	3 cm	40 cm
c 75 cm	?	62 cm

	Length of Strip	Width of Strip	Width of fabric	Length of fabric	Minimum length of single strip
a	10 cm	2cm	1.10 m	?	10 cm
b	8 cm	2.5 cm	0.80 m	?	15 cm
c	?	2 cm	1.20 m	50 cm	10 cm
d	?	2.5 cm	0.90 m	25 cm	8 cm

Fig 9



EXERCISE 49 : Design and Develop Patterns from Block for designer Skirts using Design

Objectives

At the end of this exercise you shall be able to:

- take the measurement, draft the skirt block
- waist to hip measurement.

Requirements

Tools/Materials

- measuring tape, pencil, eraser, seissors, L-scale ruler

Job Sequence

The fascinating world of designer skirts. Creating custom skirt patterns allows you to express your unique style and tailor garments to fit you flawlessly. Here are the steps to draft a basic skirt block and transform it into a stylish skirt pattern:

1 Gather your tools

- You'll need:
  - Pattern paper
  - Metre ruler
  - Pattern master / fashion ruler
  - Pencil
  - Eraser
  - Paper scissors
  - Glue stick / masking tape
  - Spare paper
  - Tape measure
  - Calculator
  - Calico / toile fabric
  - Sewing machine

2 Take measurements

- You'll need the following measurements:
  - Hip measurement
  - Waist measurement
  - Waist-to-hip measurement
  - Desired finished length

3 Decide your waist point

- Choose where you want the waist of the finished skirt to sit on your body. o Measure around your chosen point to get your 'waist' measurement. o For example, I'll measure my waist 18 cm above my hip line.

4 Waist-to-hip measurement

- Measure from your chosen waistline down to your hip line.

5 Draft the skirt block

- Using your measurements, create a basic skirt block:
  - **Skirt Front:** Cut on the fold.
  - **Skirt Back:** Cut as a pair for a center back zip or on the fold for side seam opening.
  - Optionally, add a waistband or waist facing for a clean finish.

6 Finished length

- The finished length is crucial. It's the only length measurement needed initially.
- Remember that adjustments may be necessary after fitting the toile/muslin on the body.

7 Developing the skirt pattern

- Once you have your skirt block, you can transform it into various skirt designs:
  - **A-line skirt:** Widens from the waist to the hem.
  - **Pencil skirt:** Sleek and fitted.
  - **Flared skirt:** Adds volume.
  - **Wrap skirt:** Overlapping layers.
  - **Gathered skirt:** Gathered at the waist.
  - **Color-blocked skirt:** Combine different fabrics for a unique look.

8 Experiment with design elements

- Add pockets, pleats, slits, or decorative trims.
- Play with hemlines, waistbands, and closures (zippers, buttons, or elastic).

Remember, your skirt pattern is your canvas. Let your creativity flow, and soon you'll have a collection of designer skirts that reflect your personal style.

Prepare Skirt Patterns in different styles using Manipulation

Objectives: At the end of this exercise, you shall be able to

- prepare patterns for Skirt with yoke
- prepare patterns for six gore skirt
- prepare patterns for pegged skirt.

Requirements

Tools/Instruments

- Measuring tape - 1 No.
- Scissors - 1 No.
- L-Scale ruler - 1 No.
- Ruler paper for patterns - 1 No.
- Pencil or Pen - 1 No.
- Metal weights - 1 No.
- Tracing wheel - 1 No.
- Awl - as reqd.
- Push pins - as reqd.
- Ladies' bodice block front and back pattern size back pattern size - 12 (M-Small)
- Pattern table - 1 No.
- Pattern shears - 1 No.
- Bell pins and push pins - 1 No.

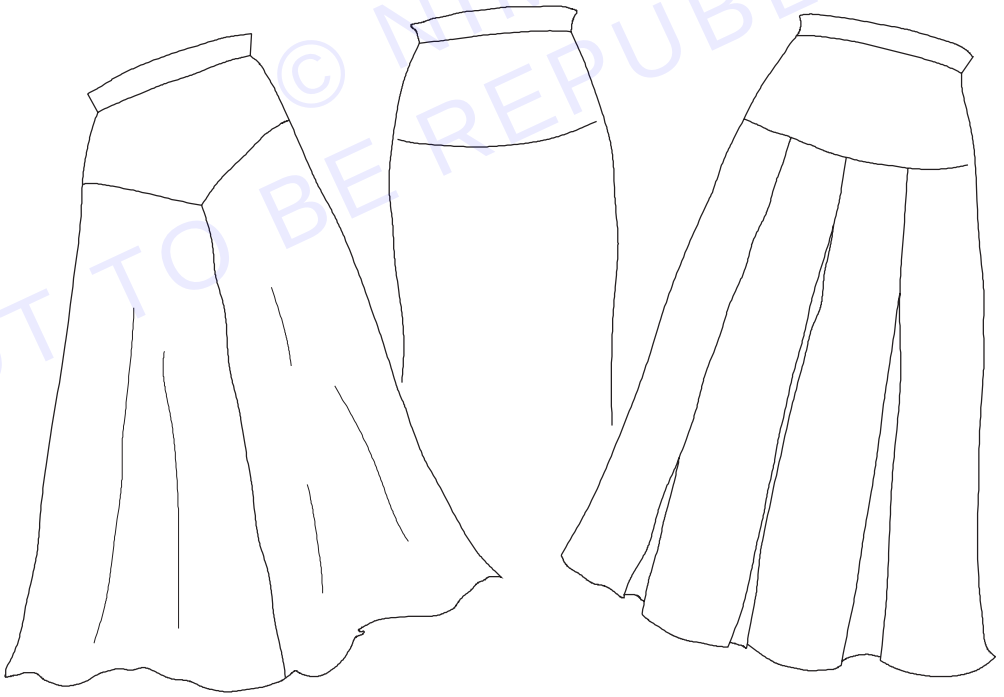
Materials

- Brown papers - as reqd.

Procedure

TASK 1: **Prepare patterns for skirt with yoke (Fig 1)**

Fig 1



Working method

1 Draw the basic skirt block pattern in a paper and do the following alterations for preparing yoke skirt pattern.

2 Mark the required or measured size of yoke points on the drawn pattern. (Fig 2)

3 Divide in half at hip and hem, draw a vertical line through the marks to the waist and move the dart onto the line. (Fig 2)

4 Slash up the line from hem to dart point. Join the yoke pieces (two) to one (i.e) fold out the dart. The line from the dart to the skirt bottom the width of the skirt bottom. (Fig 3)

5 Redraw yoke and skirt to soften the angles from the dart (Fig 4). Add required seam allow once

Note : The explained pattern is a common yoke skirt pattern, this can be modified to different styles of yoke skirt as shown in the model.

Fig 2

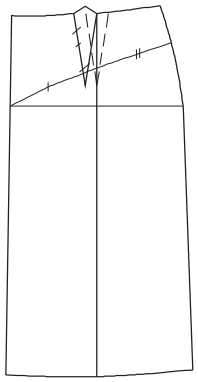
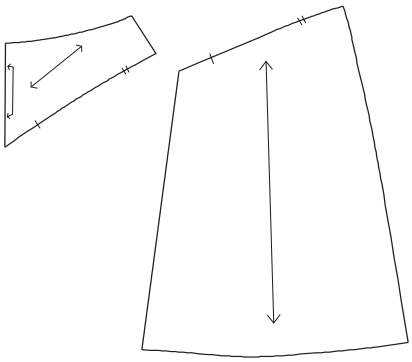


Fig 3

Fig 4



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TASK 2: **Prepare patterns for Six Gore skirt (Fig 1)**

1 Do the following alterations for preparing six-gore skirt. (Fig 1)

2 Trace the front block (Half portion with fold) (Fig 2). Draw a line from dart top to bottom. Mark 2 points 1½" away from the line as shown in the figure.

3 Join the two new points to dart tip point (Fig 3).

4 Trace the middle panel and side panel portion as shown in the Fig 4.

5 Add seam allow once and do the same of back also. (Fig 5)

Fig 1

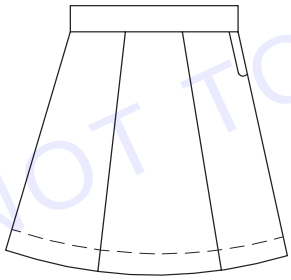

Fig 2

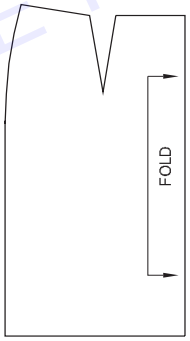

Fig 3

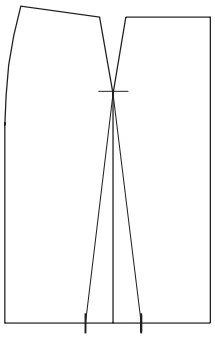

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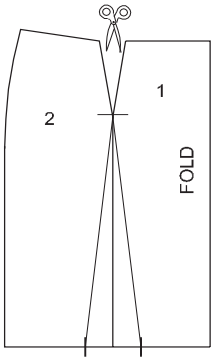
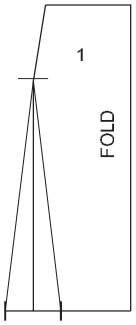
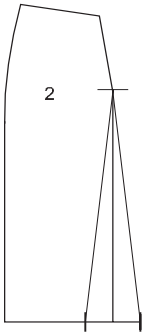
Fig 4



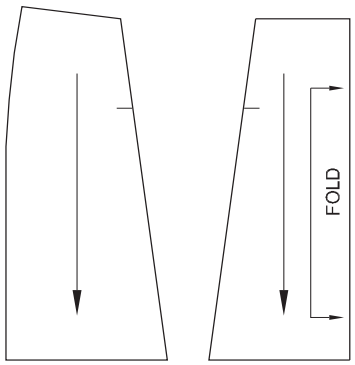


MIDDLE PANEL



SIDE PANEL

Fig 5



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TASK 3: **Prepare patterns for Pegged skirt (Fig 1)**

1 Outline the basic skirt block front part and narrow at the side seam from hip to bottom. (Fig 2)

Fig 1

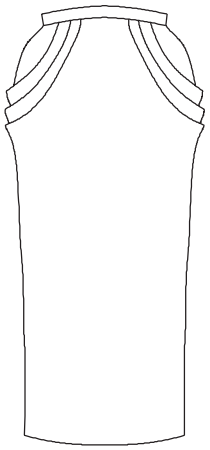
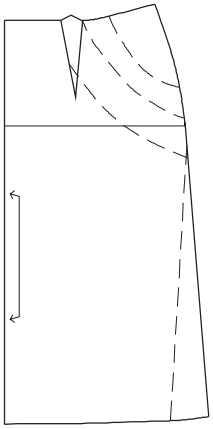


Fig 2



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2 Draw the curved lines from waist to hip at equal intervals for forming pleats. The curves must be of equal shape.

3 Slash and spread the marked curve lines. (Fig 3)

4 Redraw the pattern, with the newly created waist measurement for pleats (Fig 4)

Fig 3

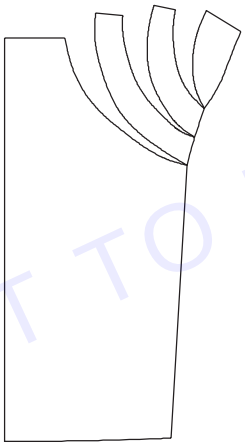
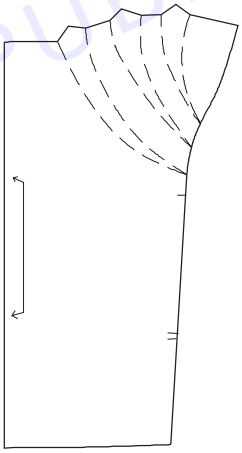


Fig 4



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5 Fold out the pleats while cutting to give shape to waist line.

Note: Get the work checked by your Instructor.

EXERCISE 50 : As pegged / godet/ tiers/gored/ yokes etc

Objectives

At the end of this exercise you shall be able to:

- take the measurement, draft the skirt block
- waist to hip measurement.

Requirements

Tools/Materials

- Measuring tape, pencil, eraser, seissors, L-scale ruler

Job Sequence

Making a draped peg skirt – construction

1 Mark the fabric very clearly. I used three colors of basting thread for

a the waist line,

b the upper part of a pleat or fold and

c the lower part of the pleat or fold.

Also the CF and CB and suggested positions.

2 Separate the cloth and cut open the marking threads carefully. If you are making the Grey skirt with two pieces of fabric then the CF is on the bias. Take care not to stretch this. I stitched the seam very cautiously and then carefully pressed open without pulling.

3 If, conversely, you have created the Navy version with the CB on the cross then as soon as you have carefully separated the pieces at CB, apply some stabilizing fusible interfacing of an appropriate weight, at least the length of the zip and around 2″ wide.

4 If you are planning to use underling, now is the time to attach it to the piece, basting it to the fashion fabric along the stitching lines.

5 Now pin in the pleats, bringing the top of the pleat to the marking of where it will lie. Once the whole skirt is pinned along the waistline (the back seam is still open) try it on the stand to ensure the pleating works in a pleasing way. Also check the waist measurement with your tape measure to ensure it will fit you.

6 Check the circumference of your hem to ensure your stride is not overly affected.

7 Make up the lining, but leave CB open for zip insertion.

8 Pin the lining together with your skirt, taking care with the bias CF seam (gray skirt), and pin to the skirt, wrong sides together at both sides of the CB.

9 Pleat the lining along the waistline seam. It doesn't have to be the same arrangement as the skirt, but should be balanced.

10 Baste along the waistline including the underlining, lining and fashion fabric

11 Prepare the waist band.

12 Sew the waistband neatly and accurately to the waistband, still leaving open the CB seam.

13 Insert an invisible or regular zip at the CB bringing it through the waist band.

14 Finish the CB seam and then attach the lining. Finish the waistband neatly.

15 Put on the skirt and enlist a helper to mark the hem. I measured up around 20″ from the floor for mine.

16 Hemming doesn't really work because the turned up hem is narrower than the skirt.

The best approach I found was to create a facing, or to cut down to a 1″ hem, then attach 1″ bias binding. This is flexible and will stretch to ensure that the hem sits neatly. Turn up the 1″ hem, baste along the hem line. Press carefully, then slip and stitch the bias binding to the underline.

Godet skirt

1 Take your measurements, including your widest hip measurement and the length measurement from your waist to the hemline you'd like.

2 Mark the goddess' top point.

3 Do some simple math.

4 Make your gadget pattern.

5 Create your skirt.

6 Press the seams open.

7 Insert the godet panes.

8 Stitch.

9 Attach the waist piece.

10 Hem the waist.

Yoke skirt

Yoke skirt is a type of skirt that features a distinctive design element called a yoke. Let me explain:

1 Yoke definition

- A yoke is a shaped pattern piece that forms part of a garment. It serves as a connecting element between different parts of the clothing.
- Yokes are typically fitted around specific areas, such as the neck and shoulders or the hips.

2 Yoke skirt

- A yoke skirt specifically refers to a skirt that is suspended from a fitted hip yoke.
- Instead of having a traditional waistband, the yoke skirt starts at the waist and extends down over the hips.
- The yoke provides structure and support, allowing the skirt to flow gracefully from the hips.

In summary, a yoke skirt combines practicality with style, creating a flattering silhouette that emphasizes the hips and ensures

MODULE 12 : Essential for Workplace

EXERCISE 51 : Design and develop patterns from block for designer pants/ culottes

Objectives

At the end of this exercise you shall be able to:

- block for pattern, materials needed.
- drafting the pattern.

Requirements

Tools/Materials

- Measuring of tape, pencil, scissors, pater, fabric

Job Sequence

A stylish culottes pattern starting from a basic skirt block. Culottes are comfortable and versatile, making them a great addition to any wardrobe. Here's a step-by-step guide:

1 Materials needed

- Basic skirt block (if you don't have one, you can create it by following a simple skirt pattern tutorial).
- Fabric for your culottes (denim, cotton, linen, etc.).
- Zipper (for the fly front).
- Interfacing (for waistband stability).

2 Drafting the culottes pattern

- **Crotch depth:** Measure the crotch depth plus 2cm (0.79in) of ease. Draw the crotch line, extending it over the center front and center back.
- **Example:** If your hip circumference is 48cm, calculate: 48cm / 6 + 2cm = 10cm.
- **Hipline:** Extend the hipline over the center front and center back by 1cm (0.4in).
- **Length:** Continue the center front and center back lines downwards until you reach your desired culottes length.
- **Back dart:** Redraw the back dart in the middle of your new back waistline.
- **Waistband:** Decide the height of your waistband (e.g., 4cm / 1.57in). Draw a parallel line to your original waistline. Separate it from the skirt, closing the darts to create a contoured waistband.

3 Features

- **Pockets:** Add pockets to the front for practicality.
- **Fly front zipper:** Instead of an invisible zipper at the back, opt for a proper fly front zipper.
- **Darts:** Include darts at the back for shaping.
- **Contoured waistband:** Ensure the waistband follows the natural curve of your waist.

4 Fabric choice

- Denim, medium-weight cotton, or linen work well for culottes.
- Consider non-stretch denim for a structured look.

Remember, this is just one approach to drafting culottes. Feel free to customize your pattern further by adding pleats, gathers, or other design elements.

Ladies' Pants

These pants are prepared with one or two pleats at the front and generally two darts at the back. Slanting pockets, parallel to the side-seam 10-15, are arranged.

Measures:

1 Full length . . . 102 cm (40").

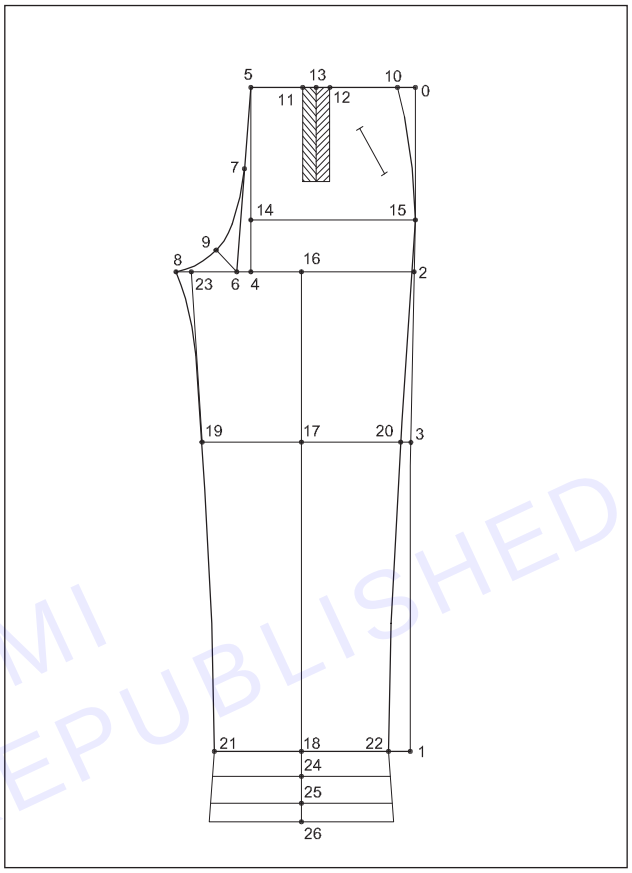
2 Inside leg . . . 74 cm (29").

3 Waist . . . 68 cm (27").

4 Seat . . . 92 cm (36").

5 Bottom 46 cm (18").

6 Belt Width .. 4 cm (1½").



Instructions for drafting

Front:- Square lines from O.

1-0 = full length less belt width plus 1 cm (⅜").

2-1 = inside leg plus 1 cm (⅜").

3-2 = half to 1 less 5.5 cm.

Square out from 2,3 and I.

4-2 = one-fourth seat plus

I cm(⅜"). Square up from 4 to5.

5 - Same as O to2,

6-4 =2 cm(¾"). Join5-6.

7 - one-sixth seat.

8-6 = one-twelfth seat less l.5cm

(⅝").9 -9.6= half of8to6,

Shape fork7,9,8.

10 -5=one-fourth waist plus4to

5 cm(½"to¾")forpleat,plus

1.5cm(½")forseams,

11 - same one twelfth seat.

12 -11=+0to5cm(l½"to2")for Pleat,

13 is midway11 to12,

14 -4=one-twelfth seat,

Square out from14 to15.

16 -4=one-twelfth seat.

Square down from 16 to 17-18.

21-18and22.18eachonefourth

bottom*,

23 -8=+2cm(¾"). Join 23-21