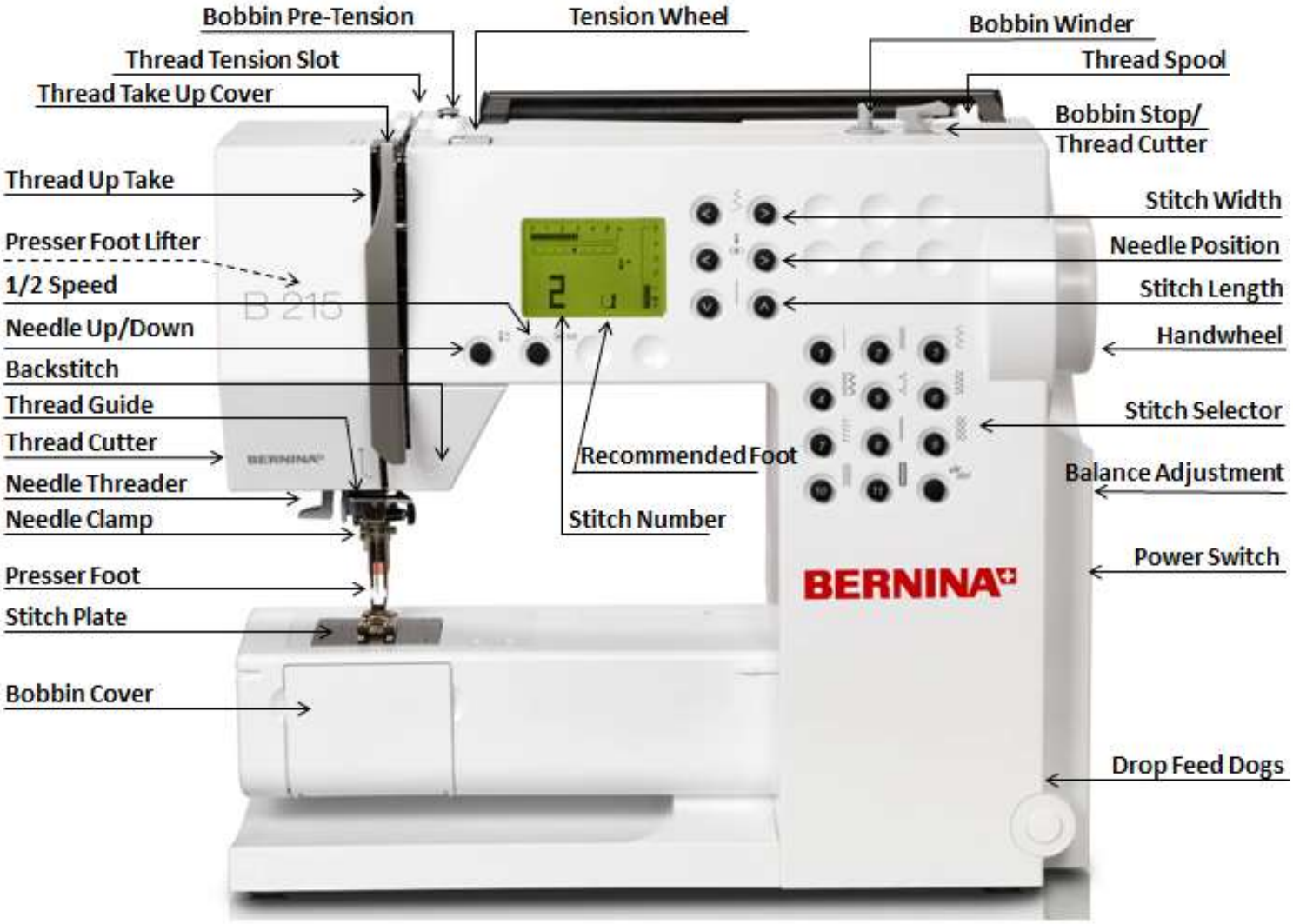
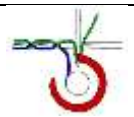
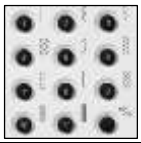
Apparel Design & Production I

Intro to the Sewing Machine

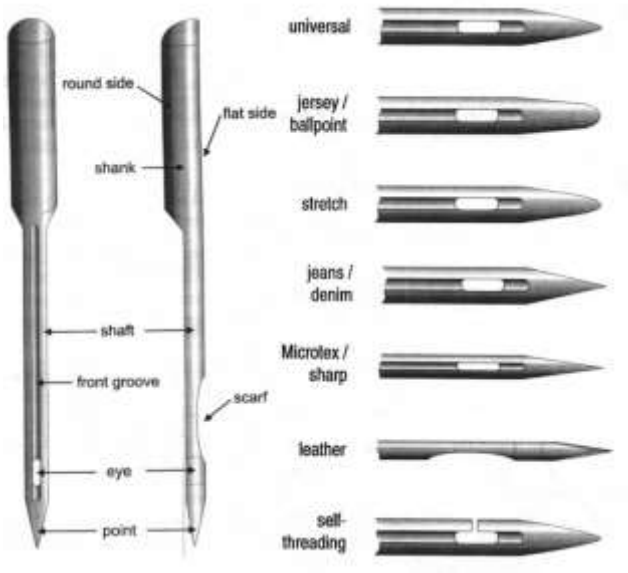


1.	Bobbin Cover	Opens to allow you to put the bobbin and bobbin case in the machine.	
2.	Stitch Plate	Where the seam allowance guidelines are found. (Each line is 1/8" apart.)	
3.	Feed Dogs	Toothed metal piece below the stitch plate that moves up and down to push the fabric along beneath the needle.	
4.	Presser Foot	Holds the fabric down against the feed dogs to move the fabric evenly through the machine. Must be **DOWN** before sewing.	
5.	Machine Needle	The upper thread is threaded through the machine needle.	

6.	How a Stitch is Formed	The upper and lower threads **INTERLOCK** as the needle passes through the fabric.	
7.	Thread Cutter	Cutting Tool on the left side of the sewing machine that allows for easy thread trimming.	
8.	Backstitch Button	When pushed in, it allows you to sew backwards until it is released.	
9.	Presser Foot Lever	Raises and lowers the presser foot. It is found on the back of the machine.	
10.	Thread Take-Up Lever	Pulls the thread from the spool pin. It must be at its **HIGHEST** point before you can sew.	
11.	Bobbin Tension Knob	Helps provide the correct amount of tension when winding thread around the bobbin. The thread should be tight and smooth when finished.	
12.	Thread Tension Dial	Controls the tightness or looseness of the thread. The red line should be lined up with the dot.	
13.	Bobbin Winder and Bobbin Stop	Winds the thread around the bobbin.	
14.	Spool Pin	Keeps the spool of thread in place as the thread feeds through the machine.	
15.	Handwheel	Will also raise and lower the needle. Turn it **TOWARD YOU** when sewing.	
16.	Display screen	Shows the selected settings for stitch width, stitch length and needle position.	
17.	Stitch Width Selectors	Allows you to alter the width of the stitching.	
18.	Needle Position Selectors	Allows you to change the position of the needle.	
19.	Stitch Length Selectors	Allows you to alter the length of the stitching.	
20.	Stitch Selectors	Allows you to select several different stitches, including the buttonhole stitch.	
21.	Foot Pedal	Applying pressure to the foot pedal will run the machine. The more pressure that is applied, the faster the needle will go up and down.	

Parts of the Machine Needle

1. The most commonly used needles are:
   a. _____
   (Used on knit AND woven fabrics)
   b. _____
   (Used on delicate fabrics, like silk, or microfiber fabrics)
   c. _____
   (Used on knits and elastic fabrics)
2. The _____ of the shank faces the _____ of the machine when you are replacing the needle.
3. The _____ size/number needles are used for fine or lightweight fabrics.
4. The _____ size/number needles are used for dense or heavy fabrics.



Serging Tips

1. Some advantages of using a serger include:
   a. _____ off excess fabric as it sews.
   b. _____ way of finishing a seam.
2. The three rules of serging are:
   a. Keep your fingers away from the _____.
   b. Don't lift up the _____.
   c. Leave a _____ behind when finished.
3. Do not lift up the presser foot unless you are serging around a round edge. Make sure the presser foot is _____ before beginning to serge.
4. Do not server over _____, _____or excessive _____.
5. The FIRST thing to check when a serger is not operating properly is the _____.
6. On a serger, the metal prong around which stitches are formed is called the _____.
7. The part of the serger that trims the seam allowances as the stitches are formed is the _____.
8. The _____ control the lower thread.
9. _____ in both the sewing machine and serger should be removed_____ to prevent build-up. The machines should also be removed _____to keep the machine running smoothly.
10. _____ is finer in size and must be good quality to prevent thread breakage and lint accumulation.

Resolving Sewing Machine & Serger Malfunctions

If the sewing machine does not sew properly, it is usually due to incorrect use.

BEFORE you ask for help, check the following:

FIRST thing to check:

*The upper and lower threads are correctly threaded.

If the upper thread breaks:

*The needle is blunt (not sharp).

*The upper thread tension is too tight.

If the lower thread breaks:

*The lower thread tension is too tight.

*The bobbin is jammed.

*The needle is blunt or bent.

If you have skipped stitches or the fabric snags:

*The needle is blunt, bent or incorrectly inserted.

*The needle being used is not appropriate for the fabric.

If the stitches are uneven or looping on either side of the fabric:

*Adjust the thread tension.

If your needle breaks:

*The needle clamp screw is not tight enough.

*The thread being used is of poor quality.

*The fabric is being pulled while needle is still inserted.

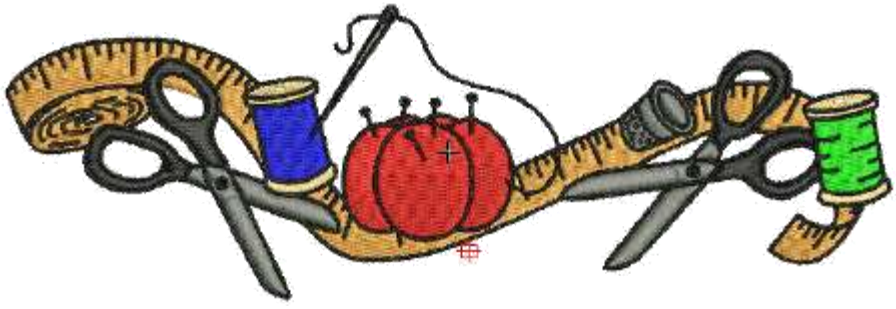
If your machine fails to run, perhaps:

*The plug is not inserted correctly.

*The power is not on.

*The bobbin winder is engaged.

*The handwheel is loose.

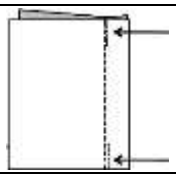
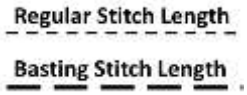
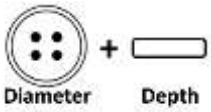
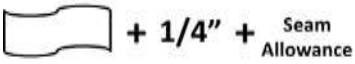
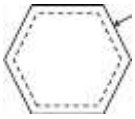
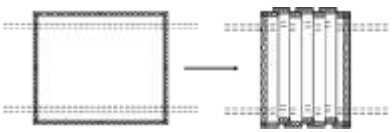
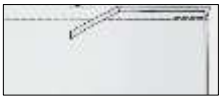


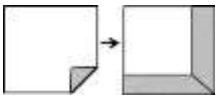
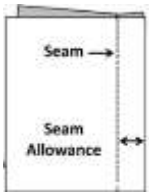
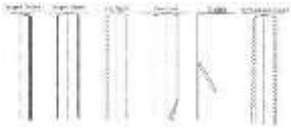
Sewing Equipment

1.		Coats and strengthens thread for hand sewing or embroidering. It also helps prevent knots.	
2.		A small spool, made of plastic or metal, around which the *lower thread* of the sewing machine is wound.	
3.		The part of the sewing machine that holds the bobbin.	
4.		A small tool used to draw elastic or other material through a casing.	
5.		Used to remove thread and fabric fibers from clothing.	
6.		Fabric safe pens or pencils used for transferring pattern markings. Most are water-soluble or have disappearing ink.	
7.		Flexible piece of equipment used to measure body measurements, grainlines and long distances.	
8.		A small, slender piece of metal with a sharp point at one end and a hole, or “eye” at the other. Used for hand sewing.	
9.		A small piece of equipment used to putt thread through the eye of a hand needle.	
10.		Small cushion used to hold and sharpen straight pins.	
11.		Holds layers of fabric together for cutting and sewing.	

12.		Shears used to cut a ziz-zag, ravel-resistant edge on fabric, usually seam allowances.	
13.		*Rotary Cutter*, *Cutting Mat* and *Ruler*. Equipment used to cut very straight, clean lines in fabric. Never use the rotary blade without the ruler or the cutting mat.	
14.		Pins used to fasten fabric together that have a protective clasp on the end.	
15.		Sharp cutting tool used for cutting patterns and other *non-fabric* items, like paper patterns.	
16.		Metal 6” ruler with a sliding marker.	
17.		Useful sharp tool that helps to unpick small stitches.	
18.		Sharp cutting tool to be used only for cutting *fabric* or other fabric items.	
19.		Used to make an even curve on seams and darts while pressing.	
20.		Small metal cone used to protect fingers during sewing.	
21.		A very long, thin strand of cotton, nylon or other fibers used for sewing. Standard thread is “all purpose” and high quality thread prevents stitching problem	
22.		Includes thread such as quilting, heavy duty, embroidery and metallic. These are used for specific purposes or for decoration.	
23.		Metal wheel and powdered paper used to transfer pattern markings to fabric.	

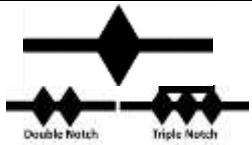
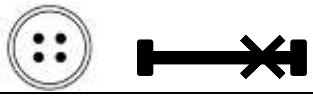
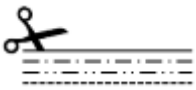
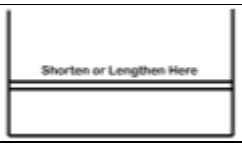
Sewing Terms

1.		The patterned side of fabric that will be showing when you are done sewing your project. Sometimes called the "Pretty Side".	
2.		The back side of fabric that will be on the inside of the project you are sewing. Sometimes called the "Ugly Side".	
3.		To machine stitch 2 or 3 stitches backwards on the same line at the beginning and end of a seam to secure the stitches.	
4.		Long, temporary stitches used to hold pieces of fabric together.	
5.		A sewn slash in a garment used with a button as a fastener.	
6.		Formula for measuring the correct length of a buttonhole: ***Button Diameter + Button Depth***	
7.		A tunnel through which elastic or cording is threaded.	
8.		Formula for measuring the correct width of a casing: ***Elastic/Cording Width + 1/4" + Seam Allowance***	
9.		Short **STRAIGHT** cuts made in the seam allowance, but not through the stitching. Allows for "bendability" on inward curves.	
10.		Cutting V-Shaped wedges out of the seam allowance. It reduces bulk on outward curves.	
11.		The ***SOLID*** line on pattern pieces that you around.	
12.		The ***DASHED*** line on pattern pieces that shows where the stitching should be.	
13.		Two or three parallel rows of basting stitches that are pulled together to create fullness in a garment.	
14.		Trimming layers of the seam allowance to decrease bulk.	

15.		Arrowed line indicating how to place the pattern piece on the material. This will run ***PARALLEL*** to the selvage.	
16.		The raw edge of any fabric, usually an article of clothing, turned back to the wrong side and stitched down.	
17.		A non-woven fabric used to strengthen and stabilize other fabrics. (It usually has a fusible, heat activated adhesive on one side.)	
18.		Pressing a corner of a square or rectangular edge, then refolding the point diagonally to create sharp right angles.	
19.		All items, other than fabric and patterns, that are needed to complete a sewing project. (Buttons, zippers, trim, etc.)	
20.		Instructions on what you will be making, including size chart, garment views, notions needed, suggested fabrics and material quantities.	
21.		Added to commercial patterns for style, fit and wearing comfort.	
22.		At the end of a stitching line, leaving the needle down in the fabric, lifting the presser foot, turning or pivoting the fabric. After lowering the presser foot, the stitching will continue in a different direction. This technique is helpful when turning corners on a project.	
23.		An extra row of stitching about 1/8" inside the original seam to reinforce an area of high stress, such as a crotch seam or underarm seam. Shortening the stitch length can also reinforce a seam.	
24.		The Stitched line that is created by sewing.	
25.		The distance between the raw edge of the fabric and the stitched lie.	
26.		Methods of finishing seam allowances so that they won't fray or unravel. (The **FASTEST** method is serging.)	
27.		The tightly woven edges on the fabric that run parallel to each other down the length of the fabric.	
28.		A hand stitch that is almost invisible on both the right and the wrong side of the project.	
29.		Products made with textiles and fabrics. Examples include: apparel, bags, linens and home furnishings.	
30.		A row of stitches about 1/4" away from the seam on the top or right side of the project.	

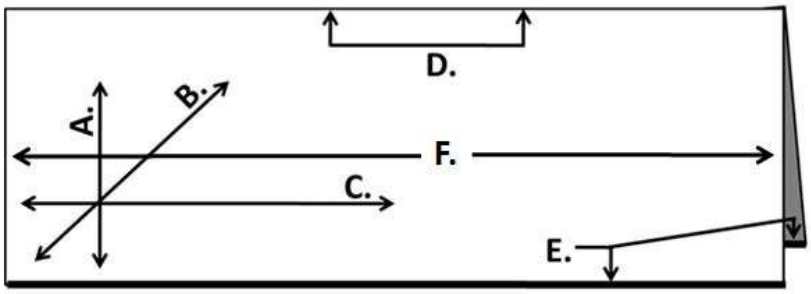
Pattern Symbols

Pattern symbols should be transferred from the paper pattern piece to the fabric **AFTER** the fabric has been cut out, but **BEFORE** the paper pattern is removed from the fabric.

1.		Arrowed line indicating how to place the pattern piece on the material. This will run ***PARALLEL*** to the selvage.	
2.		An arrow with bent corners to indicate pattern must be placed and cut on a folded edge of fabric. The fold itself is never cut.	
3.		Diamond shaped symbols that extend beyond the cutting line on a pattern. They are used to match up pattern pieces.	
4.		A small fastener usually made of plastic. It is most commonly used in clothing.	
5.		A sewn slash in a garment used with a button as a fastener.	
6.		Symbols most commonly used for placing sleeves, pockets or decorations.	
7.		Indicates where you cut both the pattern and fabric. The line style is different for each size included in multi-size patterns.	
8.		A double solid line running across a pattern piece. This is the recommended area in which to lengthen or shorten the pattern piece.	

Grainlines

Grainlines in woven fabric are important to understand because they can affect the final outcome of your project. Grainlines can affect the **stretch** and fit of clothing and the lining up of printed designs. The **direction** of the grainline arrow will show you how to place your pattern pieces.



A. _____

B. _____(Has the MOST Stretch)

C. _____(Has the LEAST Stretch)

D. _____

E. _____

F. _____

Ironing and Pressing

Equipment:

For pressing curved areas, like sleeves.

Used to prevent scorch marks on fabric when pressing.

Ironing:

1.

2.

Pressing:

1.

2.

#1 Rule:

Temperature Settings:

High:

Medium:

Low:

(Heat Sensitive)

Other Important Info:

Preparing Fabric and Patterns to be Cut

1. _____
   - Fabrics with high cotton content will shrink after its first laundering.
   - Wash and dry the fabric as you normally would to pre-shrink the fabric before cutting out any pattern pieces.
2. _____
   - After the fabric is dry, you will need to refold, press and straighten the grainlines.
   - Press the fabric WRONG sides together with SELVAGES touching.
3. _____
   - Some fabrics are considered one-way, or directional, because of the pattern.
   - All pattern pieces must be placed going in the same direction.
4. _____
   - Other directional fabrics include those with a nap. All pattern pieces must be placed with the upper edges of the pattern pieces going in the same direction.
   - **Nap**: soft and fuzzy surface on fabric created by raised, short fiber ends. (Ex: velvet, corduroy, etc.)
5. _____
   - Place pattern pieces on fabric according to the grainlines.
   - Use the pattern layouts from the pattern guide sheet. They provide layouts for the most economical use of the fabric.
   - Pay close attention to pattern symbols, like place-on-fold, and how many pieces of fabric should be cut from each pattern piece.
6. _____
   - Use pattern adjustment lines to lengthen or shorten pattern pieces based on body measurements.
7. _____
   - Pin one end of the grainline and measure the distance from the pinned side of the grainline to the selvage.
   - Then measure the other end of the grainline to the selvage.
   - The two measurements should be the same. Pin the pattern in place.
8. _____
   - When pinning pattern pieces to fabric in order to cut them out be sure to pin INSIDE the cutting line.
   - Don't use too many pins. Space them out enough to prevent bunching, but close enough to keep the pattern in place.
9. _____
   - Double check your pinning and grainlines before you begin cutting.
   - Measure twice, cut once!
10. _____
    - Use the proper cutting equipment. Sharp fabric shears are best for cutting around pattern pieces.
    - Keep the fabric as flat as possible when cutting around pieces. Do not lift fabric in the air. The shears should slide along the table.
    - Remember to cut OUT and AROUND notches!
11. _____
    - Transfer any pattern markings and symbols to the fabric AFTER the pattern pieces have been cut out, but BEFORE the patterns are unpinned and removed.
12. _____
    - When pinning fabric together in order to sew them, pin perpendicular to where the seam line will be.
    - The pinhead should be sticking out away from the fabric by about 1/4"-1/2" for easy removal while sewing.

Fabric Construction

Fiber, Yarn, Fabric

1. All fabric is made from _____, either natural or synthetic.
2. The fiber is processed and twisted into _____.
3. The yarn is then woven or knit into _____.

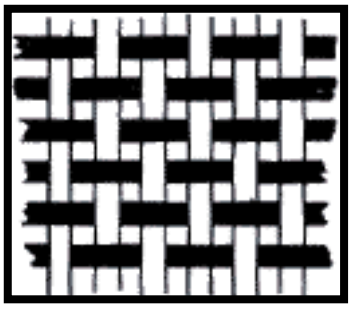
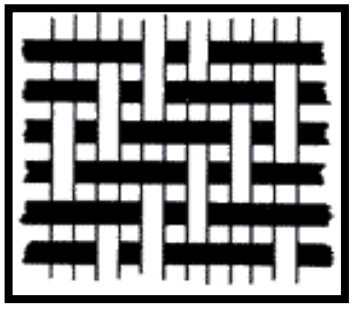
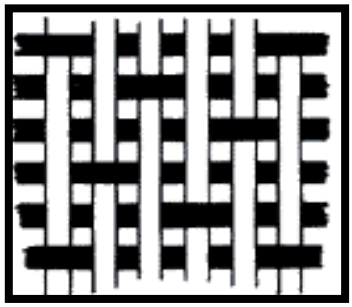
Fiber Blends

1. Fibers are often _____ in fabric to increase strength, durability, absorption, and other characteristics.
2. The most common fiber blend is _____
   - Other fiber blends include: Wool & Nylon, Raime & Cotton

FABRIC TYPE #1: WOVEN FABRICS

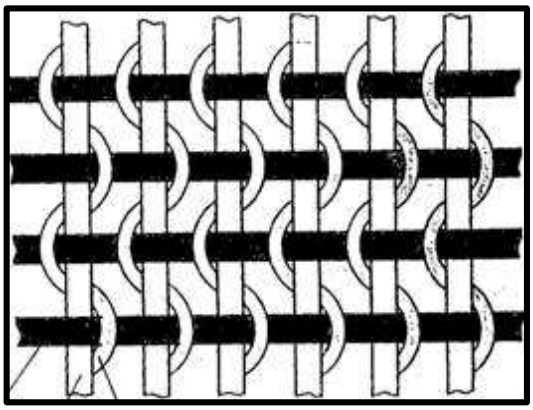
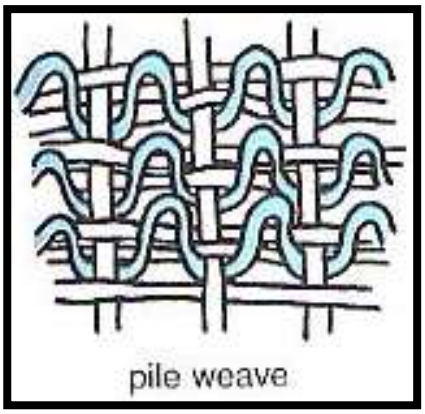
1. Woven fabrics are created by the _____ _____.
2. _____ fabric is the easiest fabric to sew on.
3. The three main types of woven fabric are:

a. _____ b. _____ c. _____

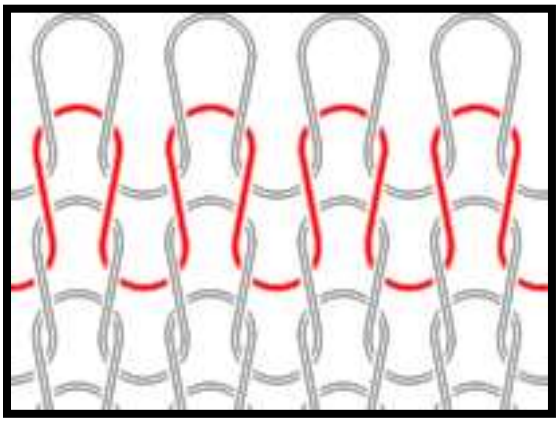
Pile Weaves

1. Pile weave are woven with _____ sets of yarns instead of two.
2. The extra yarn gives the final fabric more _____.
3. Examples of Pile Fabrics:
   a. Corduroy
   b. Terry cloth
   c. Polar Fleece
   d. Velveteen
   e. Velvet

FABRIC TYPE #2: KNIT FABRICS

1. Knit fabrics are created by the _____ _____.
2. Knits are popular because:
   a. They are easy to _____ for.
   b. They are _____ to produce.
3. Examples of Knit Fabrics:
   a. Jersey Knit
   b. Rib Knit
   c. Single Knit
   d. Interlock Knit
   e. Tricot Knit



FABRIC TYPE #3: NON-WOVEN/FELTED FABRICS

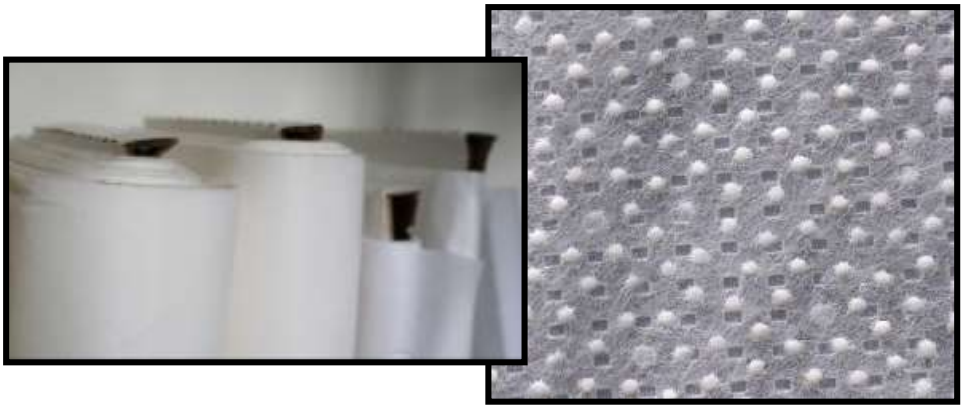
1. Non-woven fabrics are created by _____ _____.
2. The best fibers used to create non-woven/felted fabrics are:
   - Wool
   - Rayon mixed with hair or fur fibers

Felt

1. _____ is a popular type of non-woven fabric.
2. Felt comes in a _____ of thicknesses, are easy to shape, will not unravel, and has shock and sound absorbency.
3. Felt will not recover from _____, and holes in it cannot be mended satisfactorily.

Interfacing

1. Interfacing is a non-woven fabric used to _____ _____.
2. Interfacing comes in a variety of weights, thicknesses and colors.
3. Most modern interfacings have _____ on one side. These are called _____ interfacings.



Textiles and Fibers

1.		**Term used to refer to fibers, yarns or fabrics.**
2.		**The basic unit from which fabric is made.**
3.		**Fibers that come from natural sources, such as plants and animals. They are absorbent and more expensive to produce.**
4.		**Fibers that come from chemical compounds like petroleum, natural gas and many others. They are also called synthetic fibers. They are heat sensitive, less absorbent and less expensive to produce.**

Natural Fibers

5. _____

- The world uses more cotton than any other fiber!
- In 1793, Eli Whitney invented the cotton-gin which revolutionized cotton production worldwide

- Properties of Cotton:
  - Absorbent
  - Comfortable
  - Durable
  - Wrinkles
  - Shrinks
  - Easy to Launder
- Uses of Cotton:
  - Pretty Much Anything!
  - (Apparel, Towels, Blankets)

6. _____

- Wool comes from sheep and is the warmest fiber.
- Wool fibers have scales on them which cause them to be itchy.

- Properties of Wool:
  - Absorbent
  - Strong
  - Elastic
  - Shrinks When Laundered Improperly
  - Wrinkle Resistant
  - Warm
- Uses of Wool:
  - Apparel
  - Coats
  - Blankets
  - Felt

7. _____

- Flax is one of the oldest textile fibers-the Ancient Egyptians were famous for it!
- Linen is the fabric made from the flax plant.

- Properties of Flax/Linen:
  - Absorbent
  - Natural Luster
  - Quick Drying
  - Wrinkles & Frays
  - Little Stretch
- Uses of Flax/Linen:
  - Apparel
  - Bedding
  - Tablecloths
  - Accessories

8. _____

- Silk comes from the cocoons of silkworms.
- China is famous for silk. Real silk is very expensive!

- Properties of Silk:
  - Absorbent
  - Natural Luster
  - Insulating
  - Strong & Resilient
  - Dyes Well
  - Expensive
  - Degrades/Yellows from Age and Sunlight
- Uses of Silk:
  - Apparel
  - Sheets
  - Tapestries
  - Furnishings

Manufactured Fibers

9. _____

- Was the first manufactured fiber
- First named "artificial silk"-then name changed to rayon

- Properties of Rayon:
  - Soft & Comfortable
  - Drapes Well
  - Often Blended with Other Fibers
  - Shrinks & Wrinkles
  - Poor Shape Retention
  - Dyes Well
- Uses of Rayon:
  - Apparel
  - Upholstery
  - Drapery
  - Diapers

10. _____

- Started out as a varnish for airplane wings during WWI
- Produced by dry spinning
- Will dissolve in acetone (nail polish remover!)

• Properties of Acetate:	• Uses of Acetate:
- High Luster	- Formal wear
- Drapes Well	- Lining in clothing
- Loses Shape	- Furnishings
- Wrinkles	- Fiberfill

11. _____

- First synthetic made fiber in the U.S.
- Has several different structures

• Properties of Nylon:	• Uses of Nylon:
- Strong & Elastic	- Hosiery/nylons
- Water Repellent	- Carpet
- Colorfast	- Windbreakers
- Frays Easily	- Rope

12. _____

- Polyester is the most widely used synthetic fiber
- Polyester became very popular in the 1970's-It was used to make the infamous "Leisure Suit"
- Although it has many good qualities, it is not very comfortable

• Properties of Polyester:	• Uses of Polyester:
- Good Shape Retention	- Apparel
- Easy to Launder	- Furnishings
- Wrinkle Resistant	- Fiberfill
- Colorfast	- Tires
- Blends Well With Other Fibers	
- Retains Oily Stains	

13. _____

- Produced either by dry or wet spinning
- It can be destroyed by chlorine bleach
- Be sure to follow care instructions

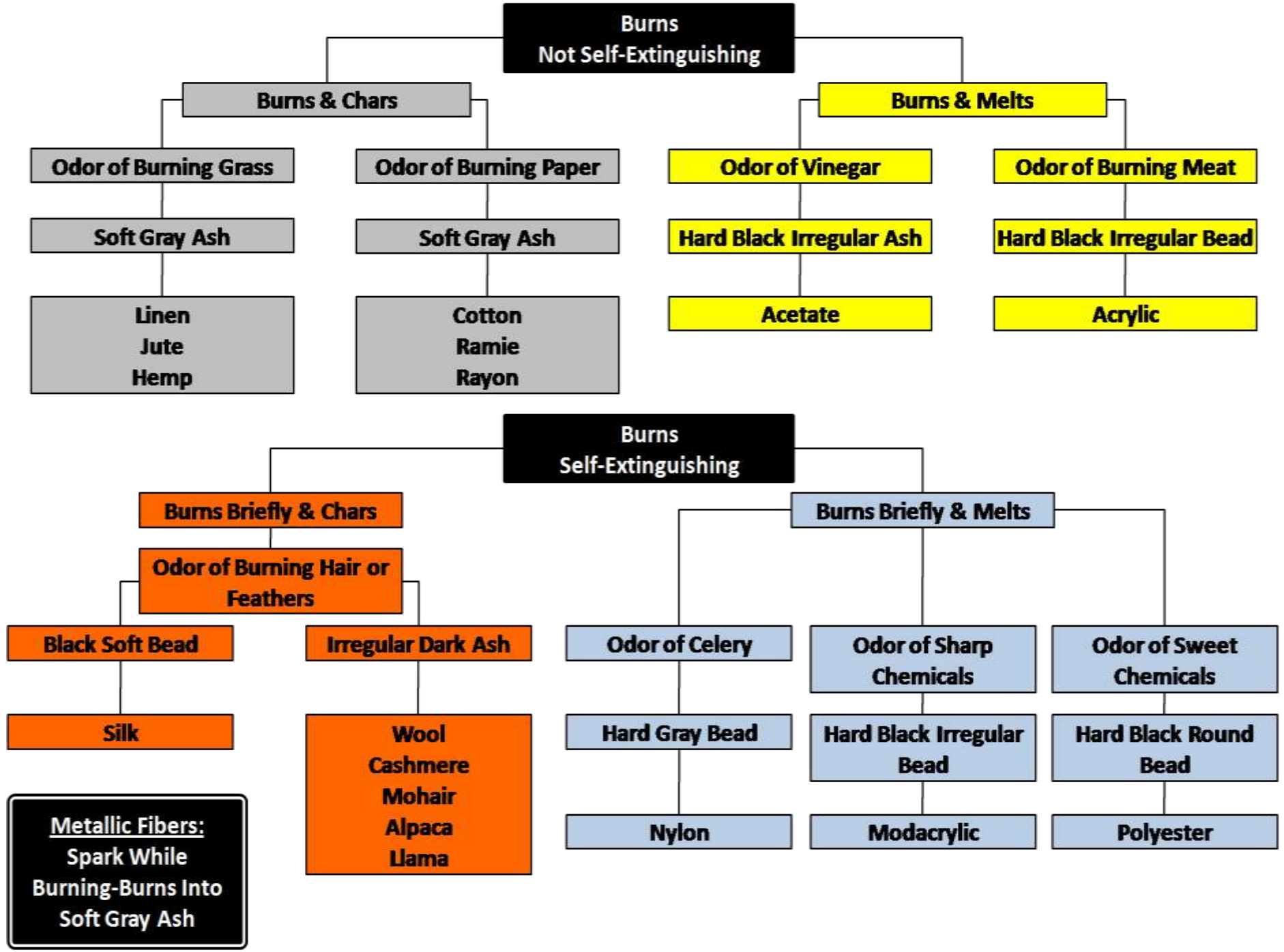
• Properties of Acrylic:		• Uses of Acrylic:
- Resembles Wool	-Pills	- Apparel
- Soft & Warm	-Heat Sensitive	- Blankets
- Nonabsorbent	-Can Shrink or Stretch	- Craft Yarns

14. _____

- Extremely elastic fiber!
- Seldom used alone in fabrics-usually mixed with other fibers

• Properties of Spandex:	• Uses of Spandex:
- Very Elastic	- Swimwear
- Adds Stretch When Blended with Other Fibers	- Exercise clothing
- Requires Stretch Stitching Techniques	- Power-stretch apparel
- Shrinks	

FIBER BURN CHART



Fiber Burn Test

For the following experiment, obtain:

11 mystery samples of fabric, small pie tin, tweezers and matches

Refer to the Fiber Burn Chart on the previous page to help you determine what type of fiber was used in each of the mystery samples. Record your findings below. Be sure to keep your samples in order. BE CAREFUL and good luck.

Choose From:

Acetate, Acrylic, Cotton, Jute, Linen, Metallic, Nylon, Polyester, Rayon, Silk, Wool

Mystery Fiber	Flame Color	Odor	Residue/Ash	Mystery Fiber Conclusion	
				Your Answer	Correct Answer
Sample 1					
Sample 2					
Sample 3					
Sample 4					
Sample 5					
Sample 6					
Sample 7					
Sample 8					
Sample 9					
Sample 10					
Sample 11					

Laundry and Stain Removal

Basic Clothing Care

1. Read _____ and treat clothes accordingly.
2. Washing _____ clothing.
3. Hot water gets clothes the _____, but also causes shrinkage or damage.
4. Cold water doesn't clean as well, but it does _____ of your clothes and conserves energy.
5. Never use _____ directly on clothing. Mix with water first.
6. Dissolve _____ in water before adding clothing.
7. Remember to clean out the _____ often.

Reading Labels

1. _____ in clothing provide _____ for washing drying, bleaching, ironing and dry-cleaning.
2. The same instructions for fabric can be found on the labels at the end of the fabric _____.

Common Care Symbols

The Laundry Process

1. _____
    a. Color
        - Whites
        - Light Colors-Solid or Patterned
        - Medium and Bright Colors
        - Dark Colors
        - Colorfastness
    b. Type and Weight of Fabric
    c. Kind and Amount of Soil
    d. Size
2. _____
3. _____
4. _____
5. _____
6. _____

The Basics of Stain Removal

1. Remember, for the best results, treat stains _____!
2. Many stains are set by _____. Be sure the stain is gone before drying.
3. Try to _____ most of the stain before using stain removal products.
4. Start at the outer edges of the stain and _____.
5. _____ the stain-don't scrub it.

Laundry Guide to... Common Care Symbols

Developed by Textile Industry Affairs. www.carelabels.com

Care Labels: *Your Guide to Easy Care*

Care labels provide helpful information that can save you time and money.

Cleaner, fresher clothes means longer-wearing apparel. And clothes that are bleachable are easier to get clean.

When a care label doesn't mention bleach or says "Bleach when needed," it means it is safe to use Clorox liquid bleach. When the label says "Non-chlorine bleach when needed" use a non-chlorine (color-safe) bleach like Clorox 2®.

Because clothes can be mislabeled, follow the easy directions on bleach container labels to test fabrics for colorfastness.

Washing Instructions

- Machine Wash, COLD
- Machine Wash, COLD Permanent Press
- Machine Wash, COLD Gentle Cycle
- Hand Wash
- Machine Wash, WARM
- Machine Wash, WARM Permanent Press
- Machine Wash, WARM Gentle Cycle
- Do Not Wash
- Machine Wash, HOT
- Machine Wash, HOT Permanent Press
- Machine Wash, HOT Gentle Cycle

Bleaching Instructions

- **Bleach as needed**
  Any bleach, like Clorox®, may be safely used
- **Non-chlorine Bleach as needed**
  Use only a color-safe bleach, like Clorox 2®
- **Do Not Bleach**
  No bleach product should be used including detergents with bleach - or follow bleach package test procedures to test for bleach safety.

Drying Instructions

- Tumble Dry, NO HEAT
- Tumble Dry, Permanent Press, NO HEAT
- Tumble Dry, Gentle Cycle, NO HEAT
- Do Not Tumble Dry
- Tumble Dry, LOW HEAT
- Tumble Dry, Permanent Press, LOW HEAT
- Tumble Dry, Gentle Cycle, LOW HEAT
- Line Dry
- Tumble Dry, MEDIUM
- Tumble Dry, Permanent Press, MEDIUM
- Tumble Dry, Gentle Cycle, MEDIUM
- Drip Dry
- Tumble Dry, HIGH
- Dry Flat

Ironing Instructions

- Iron, Steam or Dry, with LOW HEAT
- Iron, Steam or Dry, with MEDIUM HEAT
- Iron, Steam or Dry, with HIGH HEAT
- Do Not Iron with Steam
- Do Not Iron

Drycleaning Instructions

- **Dryclean**
  May appear with additional letters and/or lines
  Take this item to a professional drycleaner
- Do Not Dryclean

Staining Lab

1. Use the two squares previously sewn and serged for this project.
2. Obtain a set of foam letters from your teacher. Pin one letter to the upper left hand corner of each sample.

   Record your foam letter and color here: _____
3. Choose 9 different products found around the lab and make a small stain within each box.
   For example: Stain 1=Mustard, Stain 2=Grass, Stain 3=Ballpoint Pen, etc.
4. Be sure to record what and where each stain is located in the chart below.
5. Each piece of fabric should have the same stains in the same squares.
6. The teacher will instruct you on what to do when you are finished staining all squares.

Record Stain Type Here

Stain 1	**Stain 2**	**Stain 3**
Stain 4	**Stain 5**	**Stain 6**
Stain 7	**Stain 8**	**Stain 9**

Follow Up Questions:

1. What was the difference between the sample you treated immediately and the one you let sit for a class?

2. Were the stain removal techniques you used effective? Would you use them again?

How To Read A Pattern

1. What is a Pattern?

- **Pattern**: a paper template that is pinned on top of fabric. You cut the fabric around the pattern for each piece needed to complete your project.
- Commercial sewing patterns are generally printed on tissue paper and sold in envelopes containing a guide-sheet and suggestions for fabric and trim.
- Modern patterns are available in a wide range of prices, sizes, styles and sewing skill levels.

2. Pattern Envelope-Front

- **Pattern Number**

Four-Digit Numbering System Used to Organize Patterns

3. Pattern Envelope-Front

- **Pattern Sizes**

Most commercial patterns offer a range of sizes in one pattern envelope for convenience.

4. Pattern Envelope-Front

- **Pattern Company**

The company that makes the pattern, or the "Brand-Name."

Popular Pattern Companies Include:

McCalls, Simplicity, Vogue, Butterick, New Look, and many others!

5. Pattern Envelope-Front

- **Pattern Views**

Pattern views are small sketches of all the different styles that can be made from the basic pattern.

They are usually labeled with letters. For example:

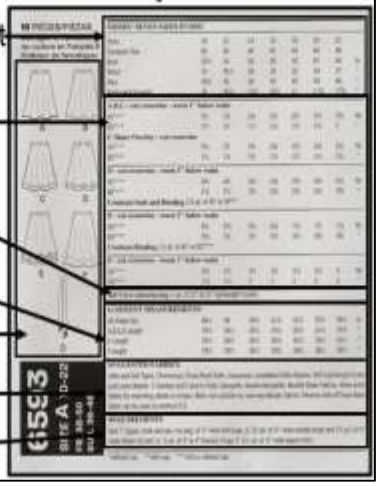
View A (Short Skirt)

View C (Skirt with Overlay)

View E (Long Skirt with 2 Matching Underskirts)

6. Pattern Envelope-Back

The back of the pattern envelope contains:



Sizing/Measurement Chart

Yardage Charts for Individual Views

Interfacing Guide

Finished Garment Measurements

Views

Suggested Fabrics

Notions / Requirements

7. Sizing/Measurement Chart

The sizing/measurement chart shows American and European sizes and the body measurements that correspond to them.

MISSES' SEVEN SIZES IN ONE								
Sizes	10	12	14	16	18	20	22	
European Size	36	38	40	42	44	46	48	
Bust	32 ½	34	36	38	40	42	44	In
Waist	25	26 ½	28	30	32	34	37	"
Hips	34 ½	36	38	40	42	44	46	"
Back- neck to waist	16	16 ¼	16 ½	16 ¾	17	17 ¼	17 3/8	"

8. Sizing/Measurement Chart

If your body measurements fall between more than one size, ALWAYS make the biggest size. You can always sew the garment smaller, but you cannot make it bigger after you've already cut it.

For Example:

What Size Would You Cut Out If Your Measurements Are…

9.

Bust: 34"

Waist: 30"

Hips: 38"

You would cut a SIZE 16.

MISSES' SEVEN SIZES IN ONE								
Sizes	10	12	14	16	18	20	22	
European Size	36	38	40	42	44	46	48	
Bust	32 ½	(34)	36	38	40	42	44	In
Waist	25	26 ½	28	(30)	32	34	37	"
Hips	34 ½	36	(38)	40	42	44	46	"
Back- neck to waist	16	16 ¼	16 ½	16 ¾	17	17 ¼	17 3/8	"

10.

Yardage Charts for Individual Views

The yardage charts tell you how much fabric to buy in order to complete your project. The example below shows the yardage required for Skirt View E.

E – cut crosswise – worn 1" below waist								
Sizes	10	12	14	16	18	20	22	
(45")	6 ½	6 5/8	6 ¾	6 7/8	7 1/8	7 ¼	7 ½	Yd
(60")	3 3/8	3 3/8	3 ½	3 ½	3 5/8	3 5/8	3 7/8	"
Contrast Binding 1 ½ yd. of 45" or 60"***								

45" = It is 45-inches from selvage to selvage

60" = It is 60-inches from selvage to selvage-More Fabric!

11.

Yardage Charts for Individual Views

E – cut crosswise – worn 1" below waist								
Sizes	10	12	14	16	18	20	22	
45"	6 ½	6 5/8	6 ¾	6 7/8	7 1/8	7 ¼	7 ½	Yd
60"	3 3/8	3 3/8	3 ½	3 ½	3 5/8	3 5/8	3 7/8	"
Contrast Binding 1 ½ yd. of 45" or 60"								

How many yards of 60" fabric would you need to buy for a size 20 in Skirt View E? **3 5/8 yd.**

How many yards of 45" fabric would you need to buy for the contrast binding in Skirt View E?

1 1/2 yd.

12. Yardage Charts, etc.

You may need to buy more fabric if it is "one-way" or directional.

Directional fabrics have a design or nap that is printed in one direction throughout. All pattern pieces must then be laid in the same direction or parts of your project may be upside down.

Directional Fabric:

Non-Directional Fabric:

13. Interfacing Guide

The Interfacing Guide will tell you how much and what kind of interfacing you will need for each View of the pattern.

All Views Interfacing: ¾ yd. of 22" to 35" lightweight fusible

How much interfacing do you need for Skirt View E? **3/4 yd.**

14. Suggested Fabrics

This section will tell you what types of fabric will, or will not, be the most suitable for each one of the projects.

SUGGESTED FABRICS

Silks and Silk Types, Charmeuse, Crepe Back Satin, Jacquards, Laundered Silks-Rayons, Soft Lightweight Linen and Linen Blends. C Overlay and E also in Voile, Georgette, Double Georgette, Novelty Sheer Fabrics. Allow extra fabric for matching plaids or strips. Note: not suitable for one-way design fabrics. Reverse side of Crepe Back Satin can be used as contrast D, E.

Is this pattern suitable for one-way fabrics? **No**

15. Finished Garment Measurements

This chart will tell you what the measurements of the garment will be AFTER you have completely finished sewing it.

GARMENT MEASUREMENTS

Sizes	10	12	14	16	18	20	22	
All Views Hip	46 ½	48	49 ½	51 ½	53 ½	55 ½	58 ½	In
A,B,C,D Length	24 ½	24 ½	24 ½	24 ½	24 ½	24 ½	24 ½	"
E Length	26 ½	26 ½	26 ½	26 ½	26 ½	26 ½	26 ½	"
F Length	28 ½	28 ½	28 ½	28 ½	28 ½	28 ½	28 ½	"

What is the finished skirt length for View E for a size 18? **26 ½ in.**

16. Notions / Requirements

Notions or requirements are all of those "other things" you need in order to complete the project. This does NOT include fabric or interfacing.

NOTIONS / REQUIREMENTS

All views: one 7" zipper, hook and eye, one pkg. of ¼" wide twill tape. A: 2/3 yd. of 5/8" wide novelty braid and 2 7/8 yd. of 3/8" wide ribbon for belt. D: 3/8 yd. of 3" to 4" beaded fringe. F: 3 7/8 yd. of ¼' wide sequin trim.

What notions are needed for Skirt View E?

One 7" zipper, hook and eye, one pkg. ¼" wide twill tape.

17. Pattern Guide Sheet

The Pattern Guide Sheet contains step-by-step instructions, cutting and pattern layout guides, pattern symbols and other sewing directions.

18. Sewing Direction Section

The Sewing Directions section defines terms, gives the measurements for the seam allowances and the FABRIC KEY shows how to tell the difference between the right and wrong sides.

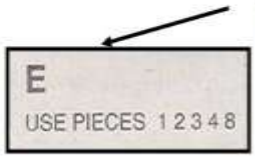
Right Side = Pretty Side

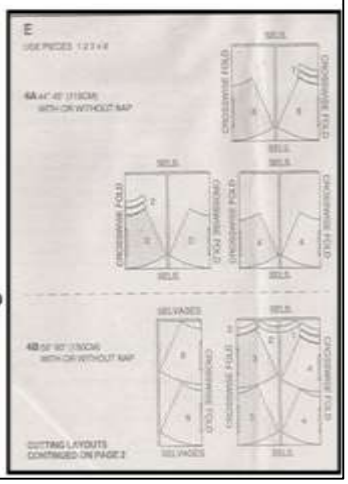
Wrong Side = Ugly Side

What is the standard seam allowance used throughout this pattern? **5/8"**

19.

The Cutting and Layout Guide tells you what pattern pieces to use and shows how to lay them out on your fabric-(for either 45" or 60 wide fabric.)



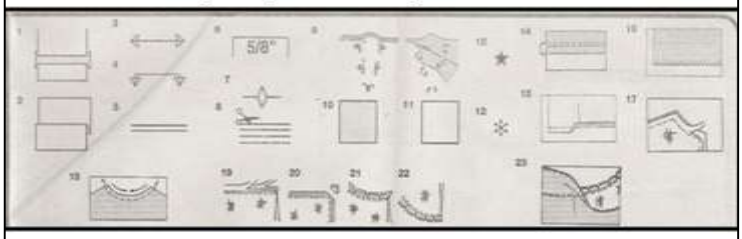


What pattern pieces are needed for Skirt View E?

1, 2, 3, 4 and 8

20.

The Pattern Symbols section contains pictures and symbols that will appear throughout your pattern. Refer to this section often throughout the construction process, especially when transferring symbols FROM your pattern TO your fabric.



Common symbols to transfer onto fabric include:

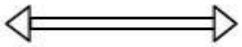
Notches 

Circles 

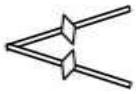
Squares 

21. Other Pattern Symbols

Grainline

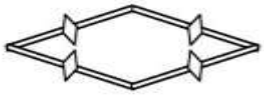


Single Dart

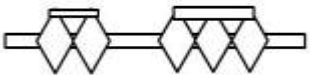


Place On Fold

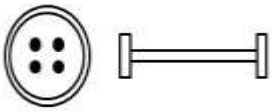
Double-Ended Dart



Double/Triple Notches



Button and Buttonhole



22. Things to Remember…

What measurement should you use when determining the correct size for a shirt?

Bust /Chest

What measurement should you use when determining the correct size for a skirt or pants?

Full Hips (Largest Circumference)

How to Measure

To make a garment that fits properly you must begin by selecting the correct pattern size. Taking accurate body measurements is the first step in determining which size pattern is best for you.

UPPER BODY

1. **Bust**:
   Measure over the fullest point of the bust, under the arms and around the widest part of the front and back.

2. **Center Front Bodice Length:**
   Measure from the collar bone indentation down the front of the body to the top of where the waistband would normally rest on the hips.

3. **Center Back Bodice Length:**
   Measure from the base of the neck, down the spine, to the top of where the waistband would normally rest on the hips.

4. **Back Shoulder Width:**
   Measure across the back, from left to right, from shoulder crease to shoulder crease.

5. **Shoulder Seam Width:**
   Measure from the collar bone, along the shoulder, and stop at the shoulder crease.

SLEEVES

1. **Upper Arm Circumference:**
   Measure around the fullest part of the upper arm, usually near the armpit.

2. **Arm Length-Shoulder to Elbow:**
   With arm slightly bent, measure from the shoulder crease down to the elbow.

3. **Arm Length-Shoulder to Wrist:**
   With arm slightly bent, measure from the shoulder crease down to the wrist crease.

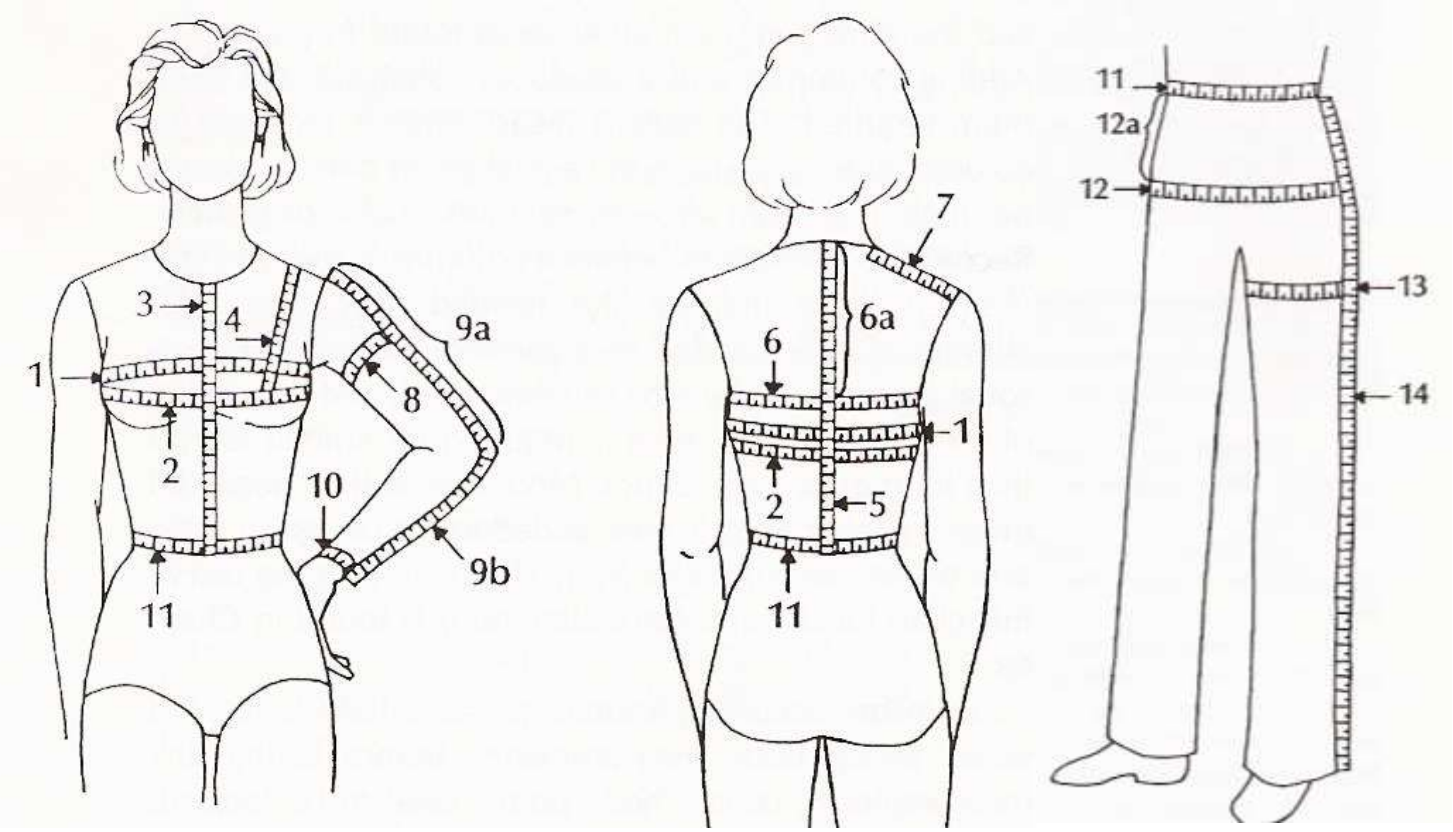
4. **Wrist Circumference:**
   Measure around the smallest part of the wrist, usually where the wrist bends.

LOWER BODY

1. **Waist**:
   Measure around natural waist indentation that occurs when you bend to the side.

2. High Hip:
   Measure above the seat, but below the natural waist. This is usually where most people wear the waistband of their pants.

3. **Full Hip (Around Seat)**:
   Measure around the fullest part of the hip, around the seat. This is usually about 7 to 9 inches down from the natural waistline.



Personal Body Measurements

Individually, or with a partner, take each of your personal measurements listed and record them below.

UPPER BODY		
Bust (#2)		
Center Front Bodice Length (#3)		
Center Back Bodice Length (#5)		
Back Shoulder Width		
Shoulder Seam Length (#7)		
SLEEVES		
Upper Arm Circumferences (#8)	Left:	Right:
Arm Length: Shoulder to Elbow (#9a)	Left:	Right:
Arm Length: Shoulder to Wrist (#9b)	Left:	Right:
Wrist Circumference (#10)	Left:	Right:
LOWER BODY		
Waist (#11)		
High Hip (#12a)		
Full Hip (Around Seat) (#12)		

Reading the Pattern Envelope

Use the pattern your teacher will give you to answer the questions below.

Use the BACK OF THE ENVELOPE for the Following Questions:

1. What is the pattern number?

2. Which pattern company does the pattern come from? (What is the "Brand Name"?)

3. Measure yourself and fill in the following measurements:
   Chest/Bust: _____ Full Hip: _____

4. According to your body measurements, what size should you make for:
   -Pajamas A?_____
   -Are you a combination of sizes? _____
   -If so, what size should you make? _____

5. What is the size range that the pattern offers?

6. Based on your measurements/size, how much material do you need to buy for:
   Pajamas A 45" wide: _____ Pajamas A 60" wide: _____
   Pajamas B 45" wide: _____ Pajamas B 60" wide: _____

7. List **THREE** suggested fabrics you could use for this project:

8. Is additional fabric needed for matching plaids, stripes or one-way fabrics?

9. What **Notions** are required to complete this project?

10. Do you need any elastic? If so, what width and how much?

11. If needed, how much and what kind of **Interfacing** do you need for:
    Pajamas A _____ Pajamas B _____

12. What are the finished garment measurements for your size?

    Bust/Chest _____ Pants Side Length _____
    Hip _____ Pants Leg Width _____

Use the GUIDE SHEET for the Following Questions:

13. What size seam allowance does the pattern call for?

14. Copy a picture of the **FABRIC KEY** below. Then, explain what this diagram shows you.

Draw a copy of the following pattern markings or symbols and explain what they mean:

15. Fold Line or Place on Fold:

16. Notches:

17. Grainline or Straight of Grain:

18. Cutting Lines:

19. List the ***numbers*** of all pattern pieces you will need to use for:

Pajamas A Pajamas B