## **Measurements and Materials**

Necessary Body Measurements Types of Fabrics Adhesives

## **Circumference** Measurements

- Head
- Neck
- Base of Neck
- Over Chest/Bust
- Chest/Bust
- Ribcage
- Waist
- Abdomen 3" below waist
- Hip Fullest part 7"-9" below waist
- Armscye
- Bicep
- Wrist
- Thigh
- Above the knee
- Below the knee
- Calf
- Ankle

## **Horizontal Measurements**

- Ear to Ear
- Shoulder Seam
- Across Shoulder Front and Back
- Bust Point to Bust Point
- Waist Front and Back
- Abdomen- Front and Back
- Hip Front and Back

## **Vertical Measurements**

- Forehead to Nape
- Center Neck to Waist Front and Back
- ArmPit to Waist
- Shoulder to Bust Point
- Shoulder to Waist
- Outside Center Back to Shoulder
- Outside Shoulder to Elbow
- Outside Shoulder to Wrist
- Shoulder to Elbow Bent
- Inside Arm to Wrist
- Armpit to Waist
- Shoulder to bust point
- Shoulder to below bust
- Shoulder to waist

- Center Waist to Floor Front and Back
- Inseam
- Girth
- Crotch Depth

• Center Neck to Floor Front and Back

## **Measurement Forms**

### Example #1

GURE 4–3. Measurement blank #2.				Date		
ACTOR:				PLAY:		
Height:	Weight:	Blo	use/Shirt:	Dress/Suit:		
Skirt/Pants:		Hat:	Tights:	Shoe:		
Pierced Ears:	yes no	A EBGHI	Allergies:			
	TORSO			SLEEVE	THOUGH	
	Low	50192	OUTSIDE ARM	LENGTH:		
Center Ne	eck Length	Artes	center ba	ck to shoulder:		
BUST/CHEST:			to elbow:			
Overbust _			to wrist:			
Ribcage	Expande	ed be	INSIDE ARM LI	ENGTH:		
WAIST:	- TRUNK		to wrist:			
HIP:						
SHOULDER SEA	M:		ARMSCYE:			
ARMPIT TO WAI			BICEP:			
ACROSS SHOUL	DERS: Front	_Back	ELBOW (90 dee	grees)		
YOKE: Front		BOLLOHEL.	FOREARM:			
CENTER NECK-WAIST: Front Back		WRIST:				
SHOULDER: to bust pt:		HAND:	THE			
to	below bust:	Dura ditta	GLOVE:			
to	waist:	APRILITY				
POINT TO POINT	11			HEAD		
			CIRCUMFEREN	ICE:		
			FOREHEAD TO	NAPE:		
BE	LOW WAIST		EAR TO EAR:	top:		
CENTER NECK-F				back:		
CENTER WAIST-		Back				
WAIST to BELOW	KNEE:	1 Concession	TEMPLE TO TE	MPLE: back:		
SHOULDER to BE	ELOW KNEE:					
NSEAM:			NAPE WIDTH: I	ow:		
THIGH:						
(NEE: above:	below:		NOTES:			
CALF:						
ANKLE:						
GIRTH: Half	Full					

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### Example #2

#### FIGURE 4-4. Measurement blank #3.

Name	Phone	Date _		
Show	Character			
HEIGHT	WEIGHT	SHOE	SUIT	
		TIGHTS		
DRESS	BLOUSE	BRA	EARS PIERCED _	
HEAD	A DAY LAND	F-NECK TO WAIST _	to FLOOR	
EAR to EAR	THE REAL OF	B-NECK TO WAIST	to FLOOR	
	and the second se	SH TO WAIST-F		
NECK BASE	2 STOCKUR	SH TO BPT	SH SEAM	
SHOULDER WIDTH F B		SHOULDER to ELBOW BENT		
ARMSCYE WIDTH F B		SHOULDER to WRIST BENT		
CHEST/BUST BPT to BPT				
UNDERBUST		UNDERARM TO ELBOW		
WAIST		UNDERARM TO WRIST		
HIPS		ARMSCYE	- Billioret	
INSEAM K		BICEP	THE POINT	
OUTSEAM		FOREARM		
THIGH	Sales of meananor	WRIST		
KNEE ABOVE BELOW		GLOVE		
CALF	Name of Street o	HALF GIRTH	ACCO DE MOCION DE DE	
ANKLE		FULL GIRTH		
		CROTCH DEPTH	ENDIWICHER OF THE	
NOTES:				
MEASURED BY:				

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## More Forms

### Example #3

	MALE MEASU		NTO OUFFT	
		REIVID	ENTS SHEET	
NAME:	HEIGHT:		ALLERGIES:	
DATE:	WEIGHT:		GLOVE:	0
PHONE/BOX:	HAT:		LT/RT HANDED:	
ROLES:	SHIRT:		HAIR COLOR:	
	PANTS:	harden	PIERCED EARS:	
A Doouganie a	SUITS:	-	and the second s	
	TIGHTS:	and the	200mm	
1	SHOE:		Statute Statute Statute	
	Т	ORSO	- Maria	
1. NECK: BASE			FRONT NECK to WAIST:	
MID			to FLOOR:	-
2. ACR. SHOULDER: F	RONT	7.	BACK NECK to WAIST:	
BACK _			to FLOOR:	
3. ACR. CHEST: FRON	т		SHOULDER to WAIST:	-
4. CHEST: REGULAR	The second second		UNDERARM to WAIST:	
4. CHEST: REGULAR _ EXPANDED	and the second	10. SHOULDER LENGTH: 11. HIP: HIGH		
5. WAIST:	100		LOW	
	AUG SWA TON			
	1	ARM		
12a. BICEP:			SHOULDER to WRIST:	2
b. FOREARM:		. 13.	to ELBOW:	1 100
		. 13.	to ELBOW:UNDERARM to WRIST:	1 1 N
b. FOREARM:		. 13. 14.	to ELBOW:	N. P. P. K.
b. FOREARM: c. WRIST:		13. 14. LEG	to ELBOW: UNDERARM to WRIST: to ELBOW:	N. P. F. K.
b. FOREARM: c. WRIST: 15a. THIGH:		. 13. 14. LEG 17a.	to ELBOW:UNDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE):	and the factor of the
b. FOREARM: c. WRIST: 15a. THIGH: b. BELOW KNEE:		. 13. 14. LEG 17a. b.	to ELBOW: UNDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO BELOW KNEE:	
b. FOREARM: c. WRIST: 15a. THIGH: b. BELOW KNEE: c. CALF:		. 13. 14. LEG 17a. b. c.	to ELBOW:	
b. FOREARM: c. WRIST: 15a. THIGH: b. BELOW KNEE: c. CALF: d. ANKLE:		13. 14. LEG 17a. b. c. 18.	VINDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO BELOW KNEE: TO MID-CALF: INSEAM TO FLOOR:	
b. FOREARM: c. WRIST: 15a. THIGH: b. BELOW KNEE: c. CALF:		LEG 17a. b. c. 18. 19.	to ELBOW: to ELBOW: to ELBOW: WAIST TO FLOOR (SIDE): TO BELOW KNEE: TO MID-CALF:	
b. FOREARM: c. WRIST: b. BELOW KNEE: c. CALF: d. ANKLE: 16. HALF GIRTH:	L HEA	13. 14. LEG 17a. b. c. 18.	VINDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO BELOW KNEE: TO MID-CALF: INSEAM TO FLOOR:	
b. FOREARM: c. WRIST: 15a. THIGH: b. BELOW KNEE: c. CALF: d. ANKLE: 16. HALF GIRTH: 11 HEAD CIRCU	I HEA JMFERENCE	. 13. 14. 17a. 5. 17a. 19. 19.	to ELBOW:	
b. FOREARM: c. WRIST: 15a. THIGH: b. BELOW KNEE: c. CALF: d. ANKLE: 16. HALF GIRTH: 17 HEAD CIRCU 2 HAIRLINE CC	HEA JMFERENCE JMPLETELY AROUN	. 13. 14. 17a. b. c. 18. 19. AD/WIG	VINDERARM to WRIST to ELBOW: WAIST TO FLOOR (SIDE): TO BELOW KNEE: TO BELOW KNEE: INSEAM TO FLOOR: CROTCH DEPTH: D	
b. FOREARM:           c. WRIST:           15a. THIGH:           b. BELOW KNEE:           c. CALF:           d. ANKLE:           16. HALF GIRTH:           1.           HEAD CIRCU           2.           HAIRLINE CC           3.	HEA MFERENCE MPLETELY AROUN	. 13. 14. 17a. b. c. 18. 19. AD/WIG	to ELBOW: UNDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO MID-CALF: INSEAM TO FLOOR: CROTCH DEPTH: D APE	6
b. FOREARM: c. WRIST: b. BELOW KNEE: c. CALF: d. ANKLE: 16. HALF GIRTH: 11 HEAD CIRCU 2 HAIRLINE CC 3 OVER TOP O 4 TEMPLE TO D	HEA JMFERENCE JMPLETELY AROUN	. 13. 14. 17a. b. c. 18. 19. AD/WIG ND HEA D TO N FOREHI	to ELBOW: UNDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO MID-CALF: INSEAM TO FLOOR: CROTCH DEPTH: D APE	6
b. FOREARM:           c. WRIST:           15a. THIGH:           b. BELOW KNEE:           c. CALF:           d. ANKLE:           d. ANKLE:           16. HALF GIRTH:           1.           HEAD CIRCU           2.           HAIRLINE CC           3.           OVER TOP O           4.           TEMPLE TO '5	HEA MFERENCE MPLETELY AROUN F HEAD-FOREHEA FEMPLE ACOSS F	. 13. 14. 17a. b. c. 18. 19. AD/WIG ND HEA D TO N OREHI D TO N	to ELBOW: UNDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO MID-CALF: TO MID-CALF: CROTCH DEPTH: TO MID-CALF: TO MID-CALF:	- 6
b. FOREARM:           c. WRIST:           15a. THIGH:           b. BELOW KNEE:           c. CALF:           d. ANKLE:           d. ANKLE:           16. HALF GIRTH:           1.           HEAD CIRCU           2.           HAIRLINE CC           3.           OVER TOP O           4.           TEMPLE TO '5	HEA JMFERENCE DMPLETELY AROUN F HEAD-FOREHEA TEMPLE ACROSS F TEMPLE ACROSS F	. 13. 14. 17a. b. c. 18. 19. AD/WIG ND HEA D TO N OREHI D TO N	to ELBOW: UNDERARM to WRIST: to ELBOW: WAIST TO FLOOR (SIDE): TO MID-CALF: TO MID-CALF: CROTCH DEPTH: TO MID-CALF: TO MID-CALF:	

### Example #4

#### FIGURE 4-6. Measurement blank #5.

### FEMALE MEASUREMENTS SHEET

Name		Date	
Character(s)		Phone	
Head	Shirt	Dress	Bra Ballet
-	Skirt/Pants	Tights _	Ballet
Malat	Hat	Glove	Shoe
Hins	Piercinas	Ring	Rt/Lt Handed
Sh. to W	Tattoos		
N to Floor Hair Swa		nfo:	
Height	Other Hair Notes:		
Weight Posture			
Allergies:		GRUSAVECKODY	MIST DEPUTY
The second s	I NO BATTARON H	EAD	
Around Ear to E			Hairline Note
Loon Die Mare - Pe		ORSO	
Around:			Across:
	Above bust	Bust	Shoulder seam:
Neck: mid lower Above bust _ Below bust Waist: High (natural) _			Shoulder F B
low @	" down from H Wai	et	Chest break: F B
IOW @	@ "dow	n from H Waist	Chest break: F B Bust SS to SS: F B
Hips: fullest point @" Belly: @" down from		aist	B point to B point
Stride: (around upper thighs with		r sten taken)	Belly SS to SS: F _ B
Stride (around u		RMS	
	ALL DAMAGE AND A		THE REAL PROPERTY
Around:			Length:
Armscye Bicep	(flexed)	(bent) CB to sh.	seam elbow
elbow (bent) Fo	rearm		to wrist
wrist hand (over hand w/thumb cupped in)			(straight) pit to wrist
hand (over hand w/thumb cu	ipped in)		to fingertip
	LUC-OMOT L	EGS	
Around:			
Thighs: upper lo	ower abov	e knee b	elow knee
Calf ankle	Foot through in	istep	
	LENGTHWISE	MEASUREMENTS	S PARIDAD OVAR
Mid-shoulder to bust point	h. waist, ctr.	F ctr. B; pr	rincess line F B
Armoit to waist high	low		
Waist to: mid-knee	mid-calf ank	le floor F	_ ctr. B Heels?
Inseam to: ankle fl	oor Crotch D	epth from h. waist .	low waist
Girth: waist to waist		and the second se	

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## **More Forms**

### Example #5



### Example #6



## **Measurment Locations**

### General



### Horizontal

#### Taking Measurements

- Place the metal tip end of the tape measure at one reference point and extend to the next reference point when taking measurements.
- Record measurements on the Model Measurement (Form or Chart or the Personal Measurement Chart found at the back of the text).
- Numbers in parentheses correspond with those on the chart. Drow line
- Arc measurements are taken from
   Irepresents
   the horizontol
- center lines to the side seam.
   bolonce line
   below woist)
- The same half of the front and back of the form is measured.

#### HORIZONTAL BALANCE LINE (HBL)

- Figures 1, 2, and 3 • Measure up from the floor to the pin
- mark (X) at center front (Figure 1).
   Use this measurement to measure up from the floor and pin mark center back and side seams. Pin mark at princess lines. Recheck measure-
- ments (Figures 1 and 3).
   Draw a line around the hip touching each of the pin marks, or use adhesive tape to mark the hipline. The standard hip depth is 6 to 7 inches down from the center front waist for juniors and petites, 8 to 9 inches down for missy size.

Personal fit. Follow the instructions very carefully and double check. If incorrect, the hemline of the skirt will not hang parallel with the floor.

#### CIRCUMFERENCE FOR FORM AND MODEL MEASUREMENTS

- Figures 4 and 5
- Bust (1). Across bust points and back.
- Waist (2). Around waist.
  Abdomen (3). Three inches below waist.
- Hip (4). Measure widest area with tape parallel with floor. Pin to mark hip level at center front (referred to as X-point).



FORM MEASUREMENTS AND FIGURE ANALYSIS 33

## **Measurement Locations**

### Horizontal

34 Chapter 2

### HORIZONTAL ARC FOR FORM AND MODEL MEASUREMENTS

#### Front

Figure 6

Figure 6

14

03-

0

(19)

2

23.

- · Across shoulder (14). Shoulder tip to center front neck.
- · Across chest (15). Center front to 1 inch above mid-armhole (pinhead mark).
- · Bust arc (17). Center front, over bust point, ending 2 inches below armplate at side seam.
- · Bust span (10). Place tape across bust points; divide in half for measurement.
- · Waist arc (19). Center front waist to side waist
- seam. · Dart placement (20). Center front to side front (princess line).
- · Abdomen arc (22). Center front to side seam, start-
- ing 3 inches down from waist. • Hip arc (23). Center front to side seam on HBL line

Figure 7

0

23-

BACK

· Hip depth (25). Center front to HBL line.



1

-03

FRONT

#### Figure 7 · Back neck (12). Center back neck to shoulder : neck. · Across shoulder (14). Shoulder tip to center bac

Back

- (14) .

18

(23)

(19)

- neck. · Across back (16). Center back to 1 inch above th
- mid-armhole at ridge of pinhead. · Back arc (18). Center back to bottom of arm plate
- · Waist arc (19). Center back waist to side wai seam.
- · Dart placement (20). Center back waist to side back (princess line).
- · Abdomen arc (22). Center back to side seam, start ing 3 inches down from waist.
- · Hip arc (23). Center back to side seam on HBL line · Hip depth (25). Center back waist to HBL line

#### Model for Personal Fit Figures 8a, b



Measurements can be taken across the model from one landmark to the other, then divided in half and recorded. If the center lines of the front and back are definitely centered, measure from the center line to the side seams of the front and back bodice.

Neck Circumference Measure around the upper neck, divide by 5,

and record in space #12

### Vertical

#### FORM MEASUREMENTS AND FIGURE ANALYSIS 35

Figure 1

0

Verification

#### VERTICAL MEASUREMENTS FOR FORM AND MODEL

#### Figures 9 and 10 • Side length (11). Pin mark below armplate at side seam to side waist.

- Shoulder length (13). Shoulder tip to neck.
- · Side hip depth (26). Side waist to HBL, on side of form being measured.
- Bust radius (9). Measure from bust point ending under bust mound to rib above.

#### Front and Back—Form and Model Figures 11, 12, 13, 14

- Center length (5). Mark neck to waist (over bridge).
- · Full length (6). Waist to shoulder at neck, parallel with center lines.
- Shoulder slope (7). Center line at waist to the shoulder tip (mark)

Figure 13

• Bust depth (9). Shoulder tip to bust point.

#### Figure 11

0

Figure 12

Shoulder slope: Measure on right and left sides. If the slope measurements differ more than an 1/8 inch, the shoulders are asymmetric.

Bust

23

radius

Side hip: Measure both side (see #26), if measure-ments differ more that 1/8 inch, the hip is asymmet-ric. The patterns will be drafted on folded paper and discussed later.

#### Figure 15 and 16: New Strap Measurement

Personal Fit: Asymmetric

Place metal tip of the measuring tape at corner of shoulder/neck to bottom of the waist band at the side seam and record.



# **Creation of Fabric**

Fiber
Yarn
Fabric

## **Types of Fiber**

- Natural or Organic
- Linen- Stalks of Flax Plant
- Cotton-Blossom of Plant
- Bamboo- Stalks of Plant
- Hemp- Stalks of Plant
- Wool- Sheep
- Silk- Cocoon of the Bombyx Mori Moth

Synthetic or Inorganic **Rayon-Wood Pulp and** Chemicals **Acetate-** Chemicals **Nylon-** Chemicals **Polyester-** Chemicals **Acrylics**-Chemicals **Spandex-** Chemicals Metallic-Metal or metal coated plastic fiber **Polypropylene-** Chemicals

## **Types of Fabric**

- Woven- Yarns that are interlocked at right angles
- Knitted-Yarns that are intelocking loops.
- Felted- Fibers that are bonded together with moisture, heat and pressure
- Knotted- Yarns that are connecte with knots



### http://www.beaconadhesives.com/cchart.htm

## **Fusible Web**



## **Fusible Web Brand Comparisons**

Product Name	Ease of Use	Amount of Fraying (1 is no fraying, 10 is a lot of fraying)	Texture Change (1 is not stiff, 10 very stiff)*
EZ-Steam	Good	8	5
EZ-Steam II	Frustrating to get the paper off before the final fuse	8	6
Wonder Under	Good	7	4
Heavy Duty Wonder Under	Web fell off of the paper before I ironed	4	6
Heat n Bond Lite	Good	2	5
Heat n Bond Ultra Hold	Good	1	7
Lite Steam-a-Seam II	Good	8	6



- http://www.beaconadhesives.com/cchart.html
- <u>https://sweetbriarsisters.com/blog/heres-best-fusible-web/</u>
- Joseph-Armstrong Helen Joseph Armstrong (Author) > Visit Amazon's Helen Joseph Armstrong Page Find all the books, read about the author, and more. , Helen.
   "Patternmaking for Fashion Design (3rd Edition) 3rd Edition." *Patternmaking for Fashion Design (3rd Edition): Helen Joseph Armstrong: 9780321034236: Amazon.com: Books*, Prentice Hall, www.amazon.com/Patternmaking-Fashion-Design-Joseph-Armstrong/dp/0321034236. pgs.33-35
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