



fifth edition

HELEN JOSEPH-ARMSTRONG

PATTERNMAKING

for fashion design

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THE BASIC SLEEVE

The basic sleeve is a mounted sleeve stitched to the basic bodice armhole.

A sleeve is to fit an arm, which is one of the most efficient and mobile parts of the human anatomy. The arm functions primarily in a forward motion but is capable of moving in every direction. This flexibility should be considered when testing the fit and comfort of the sleeve.

The center grain of a well-fitted sleeve should align with or be slightly forward of the side seam of models having a perfect stance. The arms of models with stooped shoulders tend to hang too far forward from the side seams. The arms of models with an upright stance tend to hang too far to the back from the side seams. In either case, the sleeve should align with the position of the relaxed arm without regard to alignment with the side seam.

Sleeve Terminology

Communicating in terms that are familiar with those in design and production will help to avoid misunderstanding when problem solving.

Grainline. Straight grain of the sleeve, which is the center of the sleeve from top of cap to wrist level.

Biceps level. Widest part of the sleeve dividing cap from the lower sleeve.

Sleeve cap. Curved top of the sleeve above biceps line.

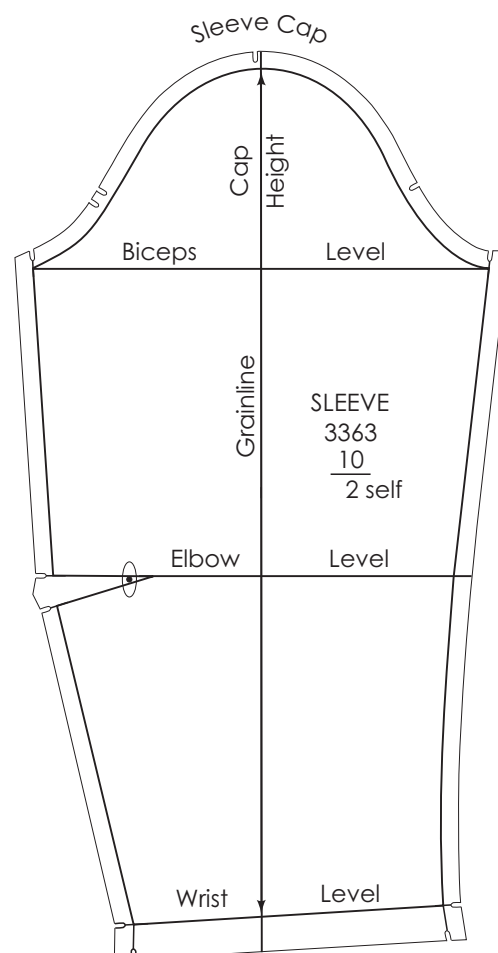
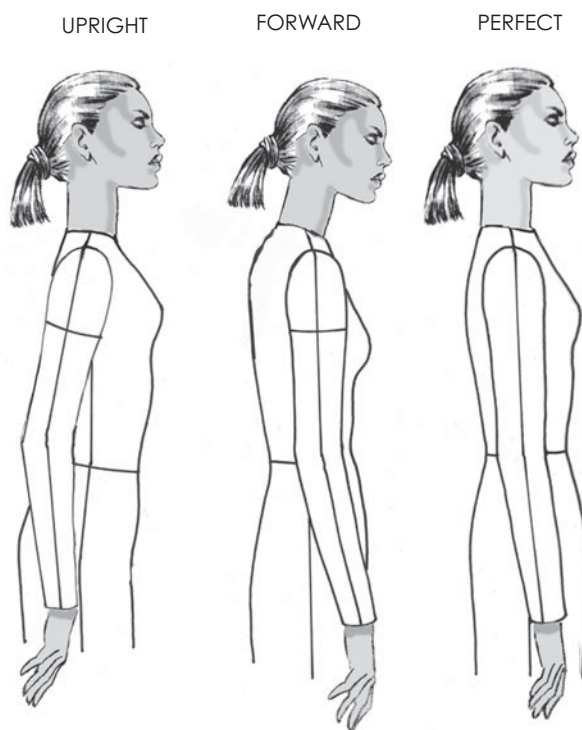
Cap height. Distance from biceps to the top at the grainline.

Elbow level. Placed at the articulation point of the arm, and the location of the elbow dart.

Wrist level. Entry for the hand.

Notches. A notch at the top of the sleeve cap divides cap ease between front and back sleeve and armhole of the bodice. One notch identifies the front sleeve, and two notches identify the back sleeve. Ease begins and ends at the front and back notches.

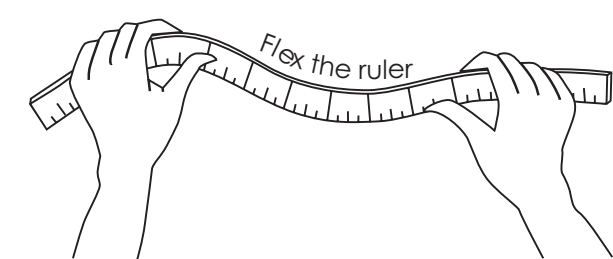
Cap ease. Ranging from 1 1/4 inches to 1 1/2 inches (depending on size) between front and back notches.



SLEEVE CAP EASE

Cap ease of the basic sleeve cap is approximately 1 1/4 to 1 1/2 inches for sizes 10 and above, and 1 1/8 to 1 1/4 inches for sizes below 10. The Sleeve Measurement Chart provides measurements for the sleeve draft but does not necessarily guarantee the correct amount of cap ease because of differences in forms and personal fit models. To help control cap ease and to avoid puckering, follow the “Armhole Measurements” formula (Figures 1a, b, and c). Other sleeve fitting problems that may develop can be resolved by referring to pages 61 through 64.

Figure 1a



Armhole Measurement

Figures 1a, b, and c

To measure the front and back armholes, use a thin, flexible plastic rule held upright when measuring. (Do not use a measure tape.)

Record measurements in spaces on the front and back armholes of the pattern for future reference.

- Measure front bodice armhole. Record ____.
- Measure back bodice armhole. Record ____.
- Add Measurements together. Record ____.
- Divide in half, add 1/4 inch. Record ____.

Record this measurements for your model size in the space provided on the Sleeve Measurement Chart titled “Armhole measurement.”

In the sleeve draft, it is the A to E instructions.

Figure 1b

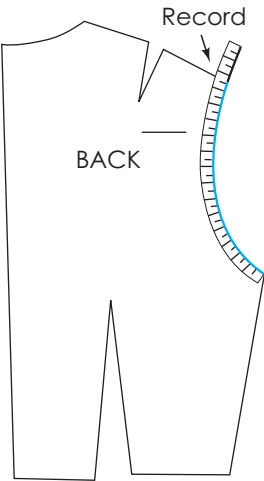
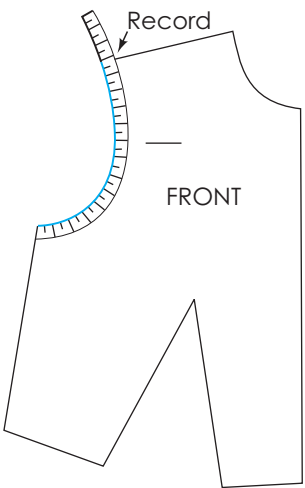


Figure 1c



SLEEVE MEASUREMENT CHART

Grade:	1"	1"	10	1 1/2"	1 1/2"	1 1/2"	2"
Sleeve length	6	8	10	12	14	16	18
Cap height	21 1/2	21 3/4	22	22 1/4	22 1/2	22 3/4	23
Armhole measurement	5 1/2	5 5/8	5 3/4	5 7/8	6	6 1/8	6 1/4
Biceps	—	—	—	—	—	—	—
	12 1/4	12 5/8	13	13 1/2	14	14 1/2	15 1/8

SLEEVE DRAFT

Figure 2

Figure 2

Draw a line on paper. Mark and label:

A to B = Sleeve length ____.

A to C = Cap height. Mark ____.

C to D = One-half of C to B.

D to D' = $\frac{3}{4}$ inch. Mark. Square lines from A, C, D', B.

Armhole measurement = _____. Place a ruler at A and pivot until the measurement touches biceps line. Mark.

C to E = One-half of biceps measurement. Mark. Compare placement of the two marks, and mark biceps in between. Label E. Draw a line from A to E; divide into fourths. Mark and label, as shown.

C to F = C to E

Draw a line from A to F. Divide into fourths, mark and label, as shown.

B to O = 2 inches less than C to E.

B to P = B to O

Draw a line from O to E and from P to F.

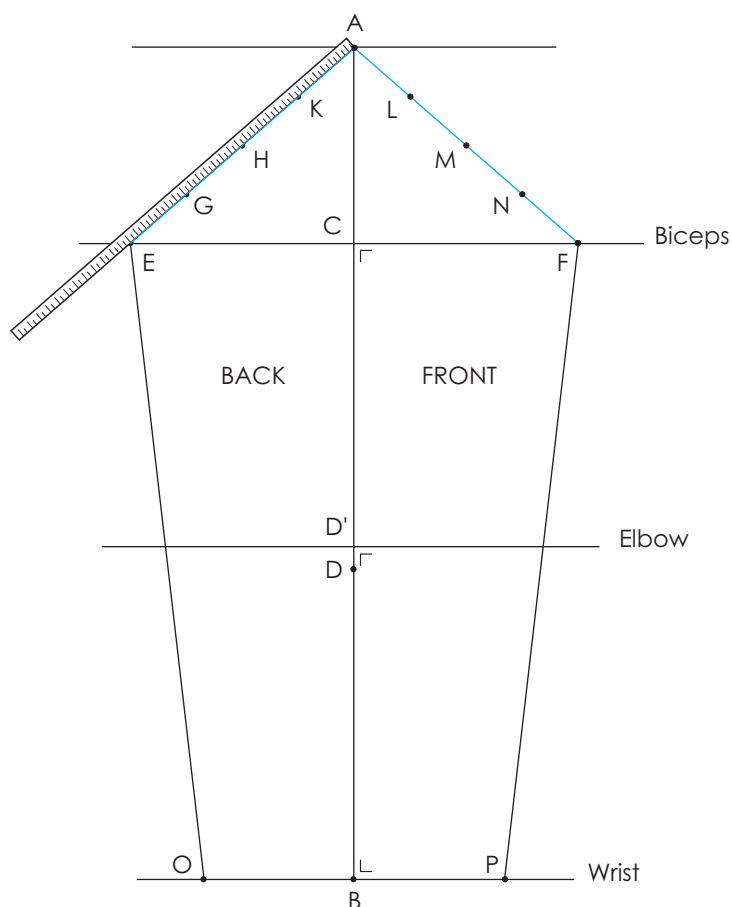
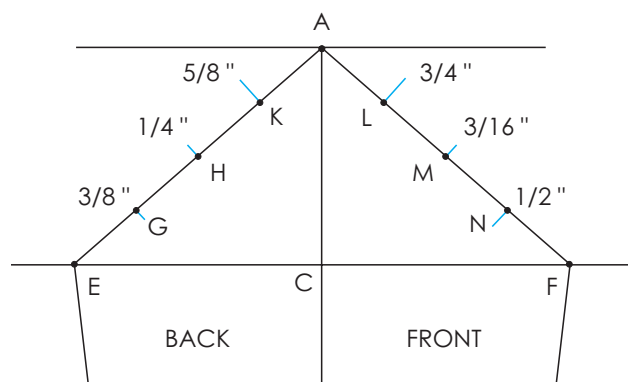


Figure 3

Figure 3

Square lines from the following:

- G—in $\frac{3}{8}$ inch
- H—out $\frac{1}{4}$ inch
- K—out $\frac{5}{8}$ inch
- L—out $\frac{3}{4}$ inch
- M—out $\frac{3}{16}$ inch
- N—in $\frac{1}{2}$ inch



Figures 4a, b
Front Capline:

- Use the French curve to shape the capline by touching A, L, and M. Draw the curve past M for blending.
- Change the position of the curve rule touching F, and N, and draw curve blending with M line (Figure 4a). Draw the curve.

Back Capline:

- Place the curve rule so that A, K, and H touch. Draw the curve past H to blend (Figure 4b).
- Change the position of the curve rule touching E and G, and draw curve blending with H line.

Figure 5

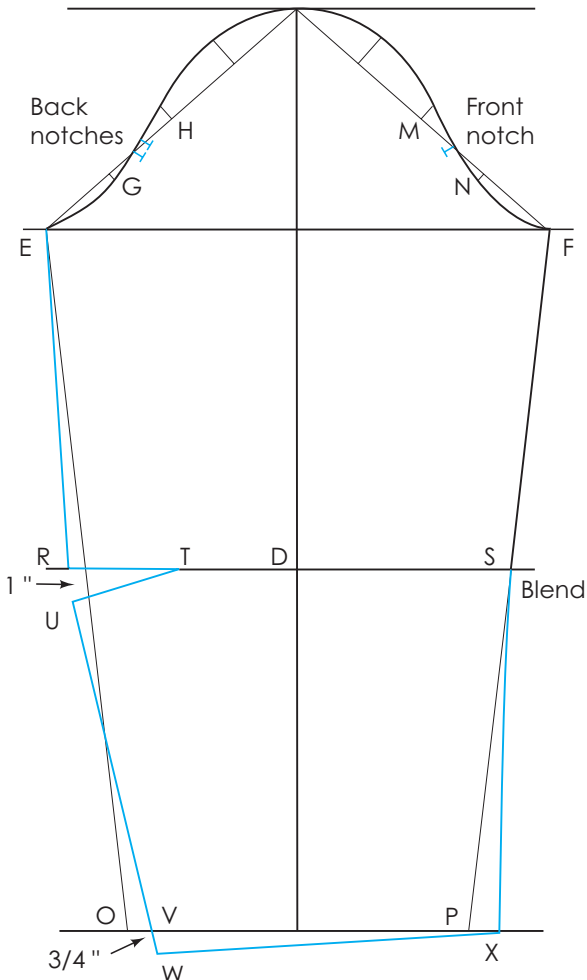


Figure 4a

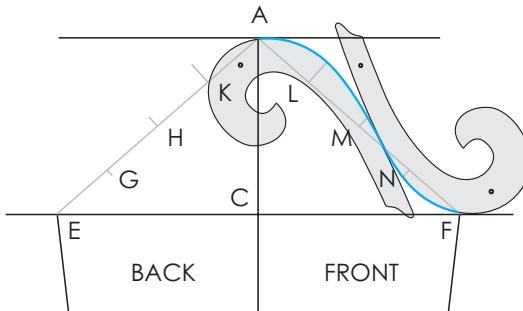


Figure 4b

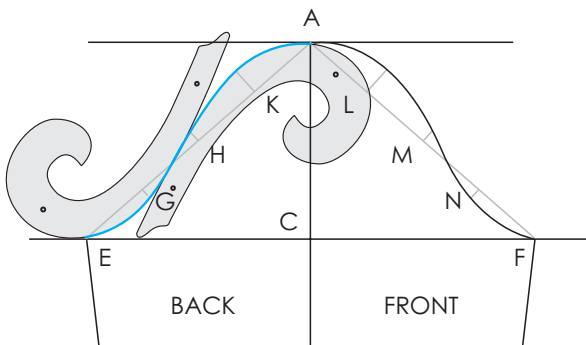


Figure 5

Completing the Sleeve:

- Label elbow Level S, and extend line R 1/4 inch. Draw a line from R to E.
- Elbow dart:
R to T = One-half of R to D. Mark.
R to U = 1 inch. Mark.
T to U = R to T. Draw connecting line.
O to V = 3/4 inch. Mark.

Draw a line from U through V equal to S to P.
Label W.

W to X = O to P. (Adjust at the fitting if necessary.)

Draw a line ending at wrist level. Draw a slightly curved line from X to S to F.

Ease Control Notches

Back—Mark notch 1/2 inch up from G and the second notch 1/2 inch above it.

Front—Mark one notch 1/2 inch above N.

Continue with instructions to determine cap ease.

ADJUSTING SLEEVE TO ARMHOLE OF BODICE

The basic sleeve should measure approximately 2 inches more across the biceps of the pattern than the circumference of the arm. The basic sleeve cap should measure an average of 1 1/4 to 1 1/2 inches more than the front and back bodice armhole. The difference between the sleeve cap and armhole measurement is the amount of ease needed to fit over the ball of the arm. The amount of cap ease is determined by the width of the biceps, the cap height, and the circumference of the front and back armhole of the bodice. If any one of the factors is out of harmony, it will affect the fit and appearance of the sleeve in the following ways: excessive or insufficient cap ease, cap ease unequally distributed between the front and back armhole, and sleeves being too tight or too loose. Incorrect placement of the shoulder or side seams of the form will affect the alignment of the sleeve. It is advisable to correct these problems before attaching the sleeve to the garment to minimize fitting problems later.

Determining Cap Ease

Two methods are given to determine cap ease. The sleeve can be walked around the front and back armhole, or the measurement can be taken by using the plastic rule. Both are illustrated.

Method 1: Walking the Sleeve

Figures 1a, b, and c

- Place the corner of the front sleeve at biceps to the corner of the bodice.

Figure 1a

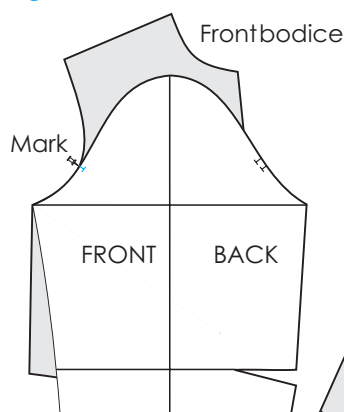


Figure 1b

Move incrementally up to this point

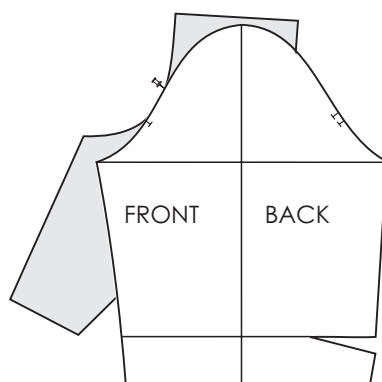
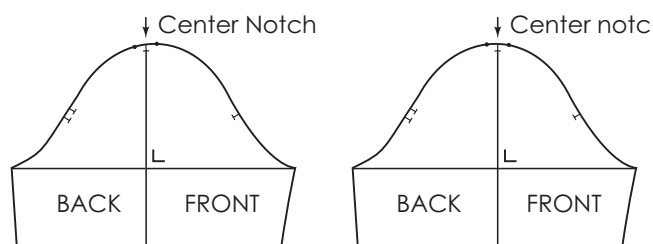
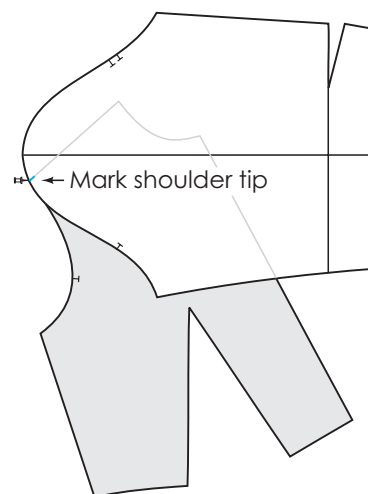


Figure 1c

Move incrementally to shoulder tip



- Use two pushpins alternately to pivot and advance the sleeve cap around the curve line of the armhole.
- Mark the notch location of the sleeve to the armhole of the bodice.
- When the sleeve cap reaches the shoulder tip of the bodice, mark the location on the sleeve cap.
- Repeat the process for the back sleeve.

Cap Ease

- If the cap ease is correct, center a notch between the marks to equalize the ease. Continue on pages 63–64.
- If cap ease is more or less than required, see pages 61–62 for suggested adjustments of the sleeve or the armhole. When adjustments have been completed, continue on pages 63 and 64.

Method 2: Flex Rule Measurement

Figures 1a, b, and c

Use a very thin flexible plastic ruler held upright with both hands as the rule is manipulated around the curves of the armholes. Measure and record (if

not already recorded). Using back armhole measurement, measure the back side of the sleeve cap and mark where the back armhole measurement ended.

Repeat the process for the front armhole and mark the front sleeve cap.

Figure 1a

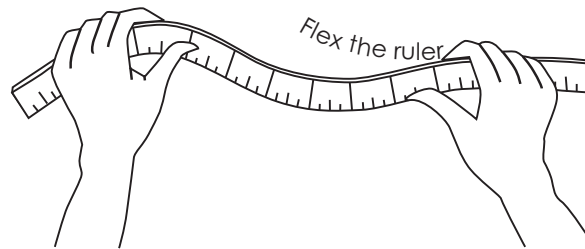


Figure 1b

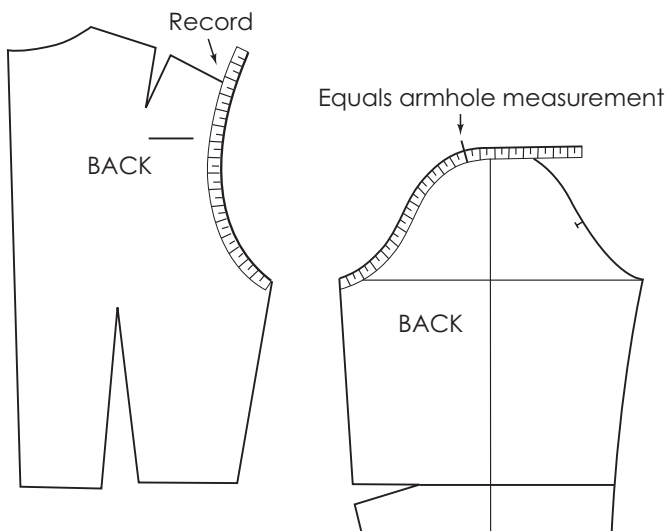
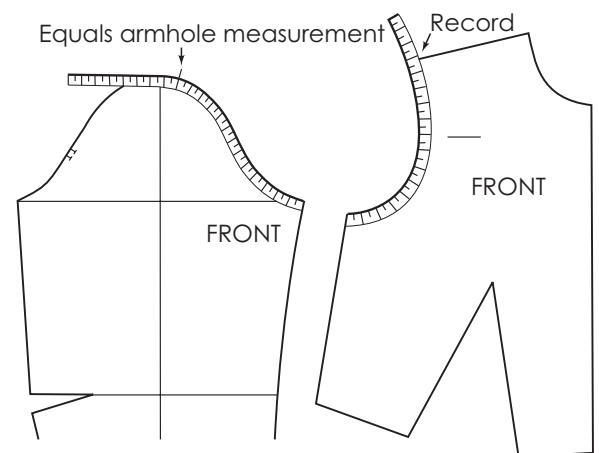


Figure 1c



Cap Ease

Figures 1d and e

Measure the distance between the marks.

- If the amount of cap ease is sufficient, center a notch between the marks to equalize the excess. The center notch may be moved to equalize the ease. Continue to the next step on pages 63 and 64 to cut, stitch, and balance the sleeve.
- If the cap ease is less or more than needed, see pages 61–62 for suggested adjustments of the sleeve or the armhole. When all adjustments have been completed, go to pages 63–64 to cut and stitch the sleeve.

Figure 1d

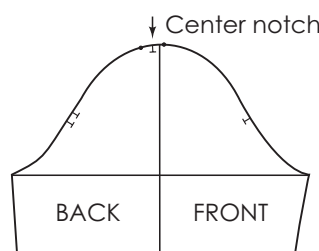


Figure 1e

