## How to Make a One-Dart Skirt Sloper

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## http://www.burdastyle.com/projects/how-to-make-a-one-dart-skirt-s



This tutorial walks you through how to draft a basic one-dart skirt sloper. This exercise can lead to other designs and variations including an A-line flare, inverted box pleats, and side drapes. For this project, our Creative/Editorial Intern Jamie also added a straight waistband to the skirt, modeled here with her favorite vintage Bernhard Altmann cashmere top and Ferragamo kitten heels. This project was sewn in a Liberty of London floral cotton print and lined with a copper silk charmeuse. Photos were taken in the stacks of the New York Public Library on Fifth Avenue and 42nd Street, a Beaux-Arts landmark building.

## Materials

Pattern paper, Mechanical pencil, Eraser, Transparent ruler, Drafting curve, Awl, Notcher, Tracing paper, Tracing wheel, 1 yard of self fabric (cotton), 1 yard of lining fabric (silk charmeuse), $1 / 8$ yard fusible interfacing, 17 -inch invisible zipper, 1 sew-on snap, thread. (Please note that yardage will vary depending on your own personal measurements and fabric width.)

## Step 1 - Get help taking your measurements

I learned the ins and outs of skirt making at Apparel Arts, a San Francisco-based fashion design and patternmaking school. This tutorial is based on extensive notes that I took throughout the program.

To ensure the most accuracy, wear undergarments or tights and enlist the help of someone to take your waist, high hip, and low hip measurements. Tie one-quarter inch wide elastic around your natural waistline and stand with your bare or stockinged feet four inches apart. Looking straight ahead, maintain your natural posture without holding your breath in.

Measure around the elastic with the tape measure level and snug for your true waist measurement (28 inches). For the high hip, measure down $41 / 2$ inches from the base of the elastic tied around your waist and take the full measurement around your hip at this depth. For the low hip, measure down 4 inches from the high hip and take the full measurement around your hip at a depth of $81 / 2$ inches. If your height is 5 feet 2 inches or shorter, you may use high and low hip depths of 4 inches and 8 inches respectively, as in this example where we have a full high hip measurement of 34 inches and a full low hip measurement of $361 / 2$ inches. If your high hip measurement is greater than your low hip measurement, use your high hip measurement for both.

To determine your skirt length, measure down from the base of the elastic tied around your waist to a desired point slightly above or to the middle of your knee ( 18 inches).

## Step 2 - Calculate your front waist measurement

Take your true waist measurement ( 28 inches) and add $1 / 2$ inch ease for a total of $281 / 2$ inches. Divide this amount by 4 , resulting in $71 / 8$ inches. Calculate your front waist measurement by adding $1 / 4$ inch to the quarter panel amount for a total of $73 / 8$ inches.

## Step 3 - Draft the front skirt block



Starting with the front skirt block, draft a rectangle that is 18 inches long (or your desired length of skirt). The width of the front skirt block is determined as follows: add $11 / 2$ inch ease to your full low hip measurement ( $361 / 2$ inches), divide that amount ( 38 inches) by 4 for a total of $91 / 2$ inches and add $1 / 4$ inch, resulting in a final calculation of $93 / 4$ inches. Label the corners A, B, C, and D as shown. Mark center front and the side.

Draw in your high and low hip guidelines at 4 and 8 inches respectively (or $41 / 2$ and $81 / 2$ inches) and label E and G at center front.

The width of your front high hip measurement ( E to F ) is calculated as follows: add 1 inch ease to your full high hip measurement ( 34 inches), divide that amount ( 35 inches) by 4 for a total of $83 / 4$ inches and add $1 / 4$ inch, resulting in a final calculation of 9 inches. Measuring across from center front on the high hip guideline (E), mark the width of your high hip calculation at F .

The width of your front low hip measurement ( G to H ) should be the same as the width of your front skirt block. Mark H on the other end of the low hip guideline.

## Step 4 - Determine your front dart distance



With the following guide, use your full waist measurement including ease (28 $1 / 2$ inches) to determine your front dart distance from center front to the first dart leg. Round up if you are in between measurements (Waist measurement plus ease - Dart distance):

24 inches - $23 / 4$ inches
25 inches - $27 / 8$ inches
26 inches - 3 inches
27 inches - $31 / 8$ inches
28 inches - $31 / 4$ inches
29 inches - $33 / 8$ inches
30 inches $-31 / 2$ inches
31 inches - $35 / 8$ inches
32 inches - $33 / 4$ inches
33 inches - $37 / 8$ inches
34 inches or more - 4 inches
Starting from center front at A, measure over the amount of your front dart distance ( $33 / 8$ inches) and mark I.

## Step 5 - Determine your front dart width



Determine your front dart width by calculating the difference between your full waist measurement with ease (28 $1 / 2$ inches) and your full low hip measurement with ease ( 38 inches), which is $91 / 2$ inches in this example. According to the guide below, the front dart width should be $3 / 4$ inch. Round down if the difference contains a fraction (Difference - Dart Width):

0 to 5 inches - Eliminate dart
6 to 7 inches $-3 / 8$ inch
8 to 9 inches $-3 / 4$ inch
10 to 13 inches -1 inch
14 to 16 inches - $1 / 4$ inch

Starting at I, measure over the amount indicated on the guide ( $3 / 4 \mathrm{inch}$ ) and mark J. Next, subtract the front dart distance ( $33 / 8$ inches) from your front waist measurement ( $73 / 8$ inches) to get the remainder of the front waist calculation. Measure over this amount (4 inches) from J and mark K.

## Step 6 - Draw in your front dart



Using your front dart width measurement (3/4 inch), determine your front dart length with the following guide (Dart width - Dart length):

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3/8 inch - 3 inches
3/4 inch - }31/2\mathrm{ inches
1 inch - 4 inches
1 1/4 inch - 4 1/2 inches
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In this example, the front dart length would be $31 / 2$ inches. Divide your front dart width ( $3 / 4 \mathrm{inch}$ ) in half to find the center of your front dart width ( $3 / 8$ inch) and mark L . Draw a straight line down from L to indicate your front dart length ( $31 / 2$ inches) and mark M .

Drop down $1 / 2$ inch from A along center front and mark N. Square off $3 / 4$ inch at center front in a right angle starting at N , then use a drafting curve to shape your front waist, ending at K .

Maintaining the same dart width, bring your dart legs (I and J) straight down to your newly drawn waistline and label $O$ and $P$ respectively. Connect your new dart legs ( $O$ and $P$ ) to the apex ( $M$ ). If necessary, adjust the top of P , the second dart leg, so that it is the same length as the first one ( O ).

Fold your dart in half along the line drawn for the front dart length ( L to M ) and, using a tracing wheel, score across the waistline over the dart bulk so that it is flush with the waistline. Unfold and draw in the new shaping.

Excluding the front dart width ( O to P ), measure the distance between N and K to make sure that it equals your front waist calculation (7 3/8 inches) and adjust K as necessary.

## Step 7 - Draw in your front side seam and add notches, awl punch, grainline, cutting instructions, and seam and hem allowance



Connect points K, F, H, and D in a fairly straight shape to create your front side seam. If necessary, smooth the pattern at the high and low hip points, but do not shave off more than $1 / 16$ inch.

Notch marks should be $1 / 4$ inch long with a $1 / 8$ inch bar across the top. For the front sloper, notch the following: the low hip at the side and the top and bottom of center front.

Notch all dart legs and awl punch $1 / 2$ inch above the apex of the dart. Draw in your length grainlines and write in your cutting instructions. For the front sloper, write in â- Cut 1 on fold â- self.â-

Add $1 / 2$ inch seam allowance for cutting and a $11 / 2$ inch hem allowance.

## Step 8 - Calculate your back waist measurement

Take your true waist measurement ( 28 inches) and add $1 / 2$ inch ease for a total of $281 / 2$ inches. Divide this amount by 4 , resulting in $71 / 8$ inches. Calculate your back waist measurement by subtracting $1 / 4$ inch from the quarter panel amount for a total of $67 / 8$ inches.

## Step 9 - Draft the back skirt block

Step 7 - Draw in your front side seam and add notches, awl punch, grainline, cutting instructions6and seam a


Draft a rectangle that is 18 inches long (or your desired length of skirt). The width of the back skirt block is determined as follows: add $11 / 2$ inch ease to your full low hip measurement ( $361 / 2$ inches), divide that amount (38 inches) by 4 for a total of $91 / 2$ inches and subtract $1 / 4$ inch, resulting in a final calculation of 9 1/4 inches. Label the corners A, B, C, and D as shown. Mark center back and the side.

Draw in your high and low hip guidelines at 4 and 8 inches respectively (or $41 / 2$ and $81 / 2$ inches).
Starting at A, move in $3 / 8$ inch away from center back and mark E for back contouring. Next, drop down 7 inches from A along center back and mark F. Square off $1 / 2$ inch from $E$ in a right angle and blend to F, forming your new center back.

Mark G at the intersection of the high hip guideline and the new center back line.
The width of your back high hip measurement ( G to H ) is calculated as follows: add 1 inch ease to your full high hip measurement ( 34 inches), divide that amount ( 35 inches) by 4 for a total of $83 / 4$ inches and subtract $1 / 4$ inch, resulting in a final calculation of $81 / 2$ inches. Measuring across from center back on the high hip guideline $(\mathrm{G})$, mark the width of your high hip calculation at H .

Mark I and $\mathbf{J}$ for the width of your back low hip measurement, which should be the same as the width of your back skirt block.

## Step 10 - Determine your back dart distance



To determine your back dart distance from center back to the first dart leg, divide your back waist measurement ( $67 / 8$ inches) in half, resulting in $37 / 16$ inches. Starting from center back at E, measure over the amount of your back dart distance and mark K. If this calculation does not divide evenly to the nearest $1 / 8$ inch, distribute the smaller quotient toward the center back and the larger quotient toward the side.

## Step 11 - Determine your back dart width



Determine your back dart width by taking your front dart width ( $3 / 4$ inch) and subtracting $3 / 8$ inch for back contouring, resulting in a final calculation of $3 / 8$ inch. Starting at K, measure over this amount and mark L. If your front dart width is $3 / 8$ inch, you will eliminate the back dart. The same applies if you have no front dart.

Next, calculate the remainder of the back waist calculation by subtracting the back dart distance ( $37 / 16$ inches) from your back waist measurement (6 7/8 inches). Measure over this amount (3 7/16 inches) from L and mark M.

## Step 12 - Draw in your back dart



Using your back dart width measurement ( $3 / 8$ inch), determine your back dart length with the following guide (Dart width - Dart length):

3/8 inch - 3 inches
$3 / 4$ inch - $31 / 2$ inches
1 inch -4 inches
$11 / 4$ inch - $41 / 2$ inches
In this example, the back dart length would be 3 inches. Divide your back dart width ( $3 / 8$ inch) in half to find the center of your back dart width ( $3 / 16 \mathrm{inch}$ ) and mark N . Draw a straight line down from N to indicate your back dart length ( 3 inches) and mark O .

Drop down $1 / 2$ inch from $E$ along center back and mark P. Square off $3 / 4$ inch at center back in a right angle starting at P , then use a drafting curve to shape your back waist, ending at M .

Maintaining the same dart width, bring your dart legs ( K and L ) straight down to your newly drawn waistline and label $Q$ and $R$ respectively. Connect your new dart legs ( Q and R ) to the apex ( O ). If necessary, adjust the top of $R$, the second dart leg, so that it is the same length as the first one $(Q)$.

Fold your dart in half along the line drawn for the back dart length ( N to O ) and, using a tracing wheel, score across the waistline over the dart bulk so that it is flush with the waistline. Unfold and draw in the new shaping.

Excluding the back dart width ( Q to R ), measure the distance between E and M to make sure that it equals your back waist calculation ( $67 / 8$ inches) and adjust $M$ as necessary.

## Step 13 - Draw in your back side seam and add notches, awl punch, grainline, cutting instructions, and seam and hem allowance



Connect points M, H, J, and D in a fairly straight shape to create your back side seam. If necessary, smooth the pattern at the high and low hip points, but do not shave off more than $1 / 16$ inch.

Notch marks should be $1 / 4$ inch long with a $1 / 8$ inch bar across the top. For the back sloper, notch the following: the low hip at the side and the low hip at center back and $1 / 4$ inch above this mark. Center back always gets two notches.

Notch all dart legs and awl punch $1 / 2$ inch above the apex of the dart. Draw in your length grainline and write in your cutting instructions. For the back sloper, write in â- Cut 2 â- self.â-

Add $1 / 2$ inch seam allowance for cutting and a $11 / 2$ inch hem allowance.

## Step 14 - Draft the straight waistband



Draft a rectangle that is $281 / 2$ inches (waist measurement plus ease) by 2 inches (double your desired finished waistband width). Label the corners A, B, C, and D as shown. (Please note that this is a sketch and not the actual full-size draft.)

Measure over the amount of your back waist measurement from A and mark E (67/8 inches, as calculated in Step 8). Square down from E and draw a straight line down, marking F.

Next, measure over the amount of your front waist measurement from E and mark G (7 3/8 inches, as calculated in Step 2). Square down from $G$ and draw a straight line down, marking $H$.

Next, measure over the amount of your front waist measurement from G and mark I. Square down from I and draw a straight line down, marking J.

Next, measure over the amount of your back waist measurement from I and mark B. Square down from B and draw a straight line down, marking D.

Determine the width of your extension for the sew-on snap (3/4 inch), with the overlap going towards the left. Measure over this amount from B and mark K. Square down from $K$ and draw a straight line down, marking L. Mark the placement for your sew-on snap.

Draw a dotted line to mark the waistband foldline ( 1 inch) and mark M and N .
Mark center front, center back, sides, extension, and foldline.
Notch marks should be $1 / 4$ inch long with a $1 / 8$ inch bar across the top. Notch the following: center front, center back, the sides, and foldline. Draw in your length grainline and write in your cutting instructions. For the waistband, write in "Cut $1 \hat{a}-$ self / Cut $1 \hat{\mathrm{a}}-$ interfacing."

Add $1 / 2$ inch seam allowance all around for cutting.

## Step 15 - Construct the skirt



Fold your fabric in half selvage to selvage and pin down pattern pieces, making sure that you will be cutting on the straight grain. Transfer all dart, awl punch, and notch markings. (Make sure to do a muslin fitting first in case any adjustments need to be made to your sloper.)

Once pattern pieces have been cut out, sew the darts first. For the best results, use a pressing ham to press the darts, with front dart bulk pressed towards the side seams and back dart bulk towards center back.

Next, match up your notches and sew all side seams, pressing them open. Attach the invisible zipper and continue sewing down center back.

Fold up $3 / 4$ inch at the hem and press. Fold up another $3 / 4$ inch, press, and top stitch to finish your hem.

## Step 16 - Construct the lining and attach to self fabric



Lining will be constructed in a similar manner as the self fabric. Use the same pattern pieces but without the hem allowance. Instead of sewing up the darts, you will pleat and baste across, with front bulk pressed towards the side seams and back bulk towards center back.

Leave 7 inches open at center back for the invisible zipper. Fold up $1 / 4$ inch at the hem and press. Fold up another $1 / 4$ inch, press, and top stitch to finish your hem.

Match up self and lining fabric wrong sides together with side seams in line. Press the $1 / 2$ inch seam allowance along the lining fabric 7 -inch opening toward the wrong side. (When worn, the right side of the lining fabric will rest against the body.) Sew both layers of fabric together at the waistline with a $1 / 2$ inch seam allowance.

## Step 17 - Construct the waistband and sew the invisible zipper to lining

Next, construct your waistband. Iron on fusible interfacing to the wrong side of the self fabric. Fold the waistband in half lengthwise (wrong sides together) and press. Pin the skirt self fabric and waistband right sides together with center front, center back, and side seams matching the waistband notches. Sew together at a $1 / 2$ inch seam allowance, making sure that the left side of the skirt waistband has a $1 / 2$ inch seam allowance jutting out and that the extension is on the right side of the skirt. Press the waistband and seam line up.

Next, fold in the $1 / 2$ inch seam allowance on the unstitched end of the waistband towards the wrong side and press to create a crease.

Fold the waistband over at the foldline, right sides together and wrong sides out. On the left side of the waistband (the side with no extension), sew the end at a $1 / 2$ inch seam allowance and trim the seams and corners down before turning right side out. Press the waistband along the foldline wrong sides together.

On the extension end, also sew the end at a $1 / 2$ inch seam allowance, trimming the seam and corners down before turning right side out. Press here and the entire waistband along the foldline wrong sides together.

Next, hand sew the ends of the waistband shut using a slipstitch. Continue to use a slipstitch to hand sew the folded edge of the waistband to the skirt seamline (where lining and self fabric were sewn together) to fully join the inner waistband to the lining of the skirt. Prior to this, you may want to trim down the seam allowance at the waist to $1 / 4$ inch to reduce bulk.

Sew the snap onto the waistband. Lastly, slipstitch around the invisible zipper to attach to the lining, using the $1 / 2$ seam allowance crease as a guide.

C'est fini!

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