



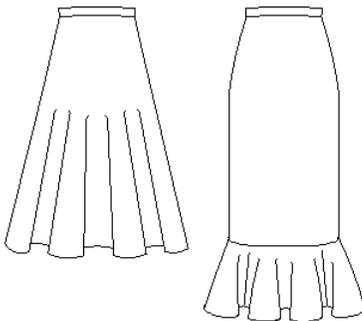
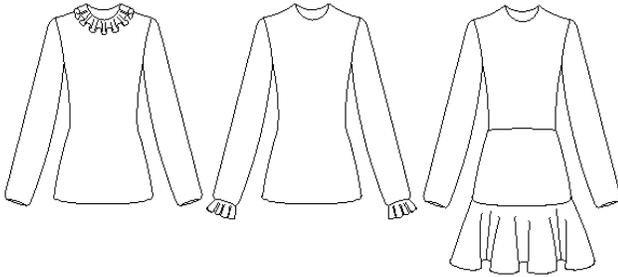
Drafting Circular Patterns for Skirts, Collars, Cuffs, Flounces, and Cascades

by Lisa A. Christman, Ph.D.



Introduction

Circles and parts of circles can be used to create a wide variety of skirts, peplums, collars, cuffs, capes, and cascades. The patterns can be based on a full circle or a part of a circle (called a circular or three point arc) depending upon the desired effect. Most styles will have an inner circle which is sewn to a joining seam or waistband and an outer circle that becomes the hemline.



Circular Patterns

To create patterns based on circles, the radius of the circle must be calculated. The radius of a circle is the distance from the center point of the circle to the edge of the circle and is based on the length of the seam to which the inner circle will be stitched. The Circle Calculator will be used to determine the radius necessary to draft the circles to correct measurements.



Circle Calculator

The following instructions can be applied to any design such as skirts, peplums, collars, cuffs, capes, and cascades. Only two measurements are needed - the length of the joining seam such as the waist

circumference, sleeve hem, neckline circumference, or bodice or skirt hemline circumference and the length of the finished pattern (skirt length, collar width, cuff width, peplum width, etc.). The following patterns will be drafted without seam allowances. Use the Offset (OF) and Intersect (IN) tools to add seam allowances after completing the drafts.

This class can be completed in our Cameo, PatternMaster, and Digital Flat Pattern software.

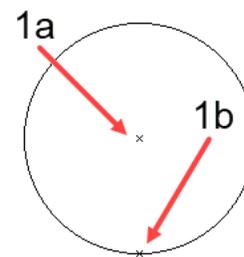
Full Circle Without Seams

The full circle will have a "circle within a circle" for the joining seam and hemline and will not have center or side seams.

NOTE: For circle skirts sewn to a waistband, 1/2 inch (1.25 cm) is typically subtracted from the waist circumference to account for fabric stretch. If you are drafting patterns for collars, cuffs, capes, cascades, or peplums, use the exact measurement of the joining seam.

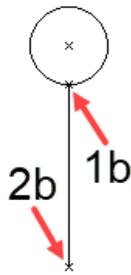
NOTE: The full circle pattern does not have an opening for a zipper. The full circle pattern with no seams is appropriate for collars, cuffs, flounces, and peplums where the garment can be donned without a zipper.

1. Choose Calculator (CA) from the Utilities menu.
2. Enter the length of the joining seam.
3. Choose Full Circle and press the Circle -> Radius button to calculate the radius.
4. Choose Circle (CI) and CLICK to place point 1a, the center of the circle.
5. Hold the Control key down, drag the mouse down.
6. Release the Control key, type the **calculated radius** on the keyboard, and press the Enter key



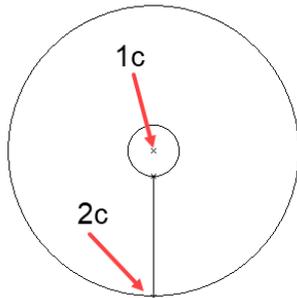
Draw Inner Circle (Joining Seam)

7. to place point 1b.
7. The circle will be drawn to the length of the joining seam or waist circumference.
8. Choose Line (LI) and SNAP to point 1b to place the first point of the line.
9. Hold the Control key down and drag the mouse down.
10. Release the Control key, type the desired finished length of the pattern, and press the Enter key to place point 2b.



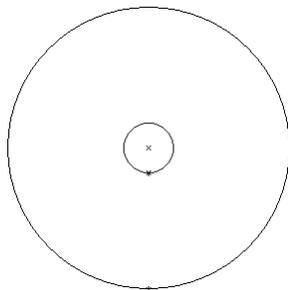
Draw Line for Outer Circle (Length)

11. To draw the outer circle, choose Circle (CI) and SNAP to point 1c to place the center of the circle.
12. SNAP to point 2c to place the radius of the circle.



Draw Outer Circle

13. Select and delete the line placed.
14. Choose File Save (Ctrl S) to save the final pattern.



Finished Circle Pattern

Full Circle with Seams

The following instructions will draft one half of a full circle skirt. This pattern will have two seams. The seams can be placed at center front/center back or at the sides of the body.

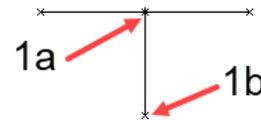
1. Choose Calculator from the Utilities menu.
2. Enter the length of the joining seam.
3. Choose 1/2 Circle and press the Circle -> Radius button to calculate the radius.
4. Choose Line (LI) and CLICK to place the first point of the line.
5. Hold the Control key down, drag the mouse down.
6. Release the Control key, type the **calculated radius** on the keyboard, and press the Enter key to place the second point of the line.

7. Select the line just drawn and choose Locate Mid (LM) to place a point in the center of the line.



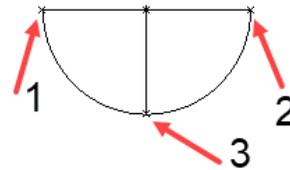
Draw Horizontal Line and Place Mid Point

8. Choose Line (LI) and SNAP to the point 1a just placed.
9. Hold the Control key down and drag the mouse down.
10. Release the Control key, type 1/2 of the calculated radius on the keyboard, and press the Enter key to place point 1b the second point of the line.



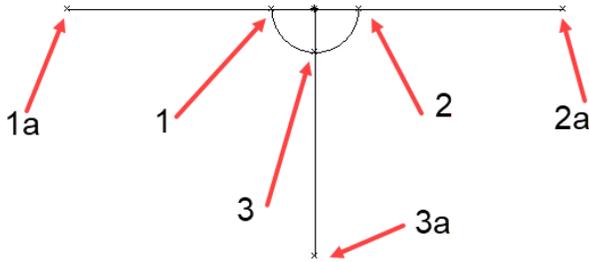
Draw Vertical Line

11. Choose Arc (AR). SNAP to point 1, SNAP to point 2, and SNAP to point 3. The arc will be drawn to one half of the joining seam measurement.



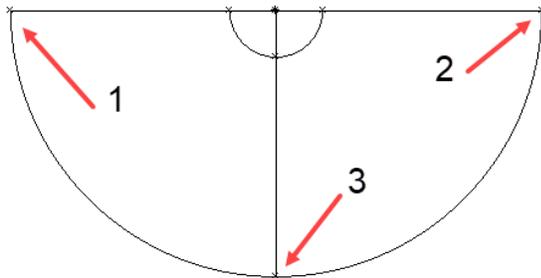
Draw Inner Arc for Joining Seam

12. Choose Line (LI) and SNAP to point 1.
13. Hold the Control key down and drag the mouse to the LEFT.
14. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 1a the second point on the line.
15. Choose Line (LI) and SNAP to point 2.
16. Hold the Control key down and drag the mouse to the RIGHT.
17. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 2a, the second point of the line.
18. Choose Line (LI) and SNAP to point 3.
19. Hold the Control key down and drag the mouse DOWN.
20. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 3a, the second point of the line.



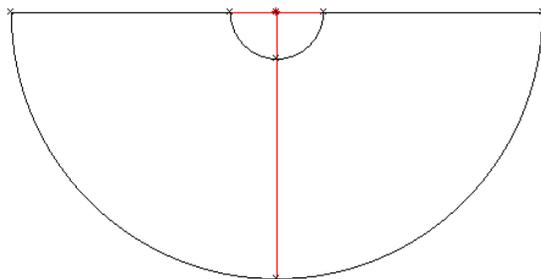
Draw Lines for Length of Pattern

21. Choose Arc (AR) and SNAP to point 1, SNAP to point 2, and SNAP to point 3.

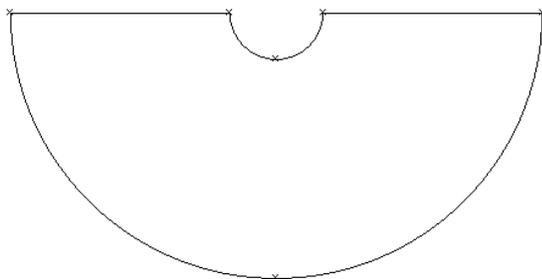


Draw Outer Arc for Length of Pattern

22. Select and delete the lines and the mid point as shown.



Delete Selected Lines and Mid Point



Finished Full Circle with Seams

Three Quarter Circle

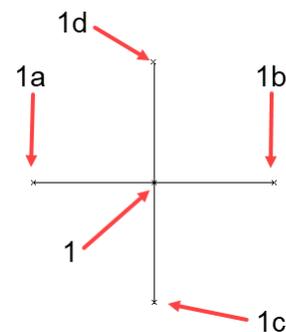
The following instructions will draft three quarters of a full circle pattern. This pattern drafts with one seam. The seam can be placed at center front or center back on the body.

1. Choose Calculator from the Utilities menu.
2. Enter the length of the joining seam.
3. Choose 3/4 Circle and press the Circle -> Radius button to calculate the radius.
4. Choose Line (LI) and CLICK to place point 1a, the first point of the line.
5. Hold the Control key down and drag the mouse to the right.
6. Release the Control key, type the **radius * 2** on the keyboard, and press the Enter key to place point 1b, the second point of the line.
7. Select the line just drawn and choose Locate Mid (LM) to place a point in the center of the line.



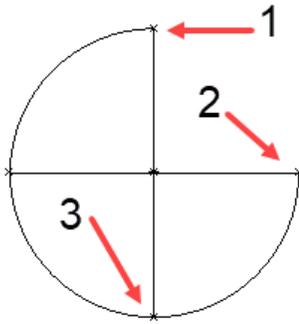
Draw Horizontal Line and Place Mid Point

8. Choose Line (LI) and SNAP to point 1, the mid point just placed to place the first point of the line.
9. Hold the Control key down and drag the mouse DOWN.
10. Release the Control key, type the calculated radius on the keyboard, and press the Enter key to place point 1c, the second point of the line.
11. Choose Line (LI) and SNAP to point 1 to place the first point of the line.
12. Hold the Control key down and drag the mouse UP.
13. Release the Control key, type the calculated radius on the keyboard, and press the Enter key to place point 1d, the second point of the line.



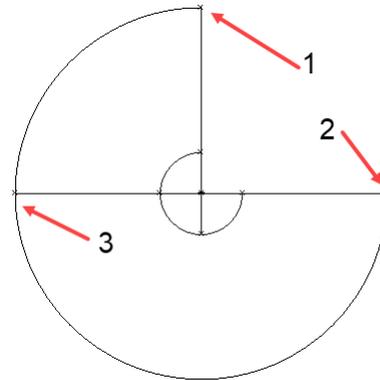
Draw Vertical Lines

- 14.** Choose Arc (AR). SNAP to point 1, SNAP to point 2, and SNAP to point 3. The arc will be drawn to the length of the joining seam measurement.



Draw Inner Arc for Joining Seam

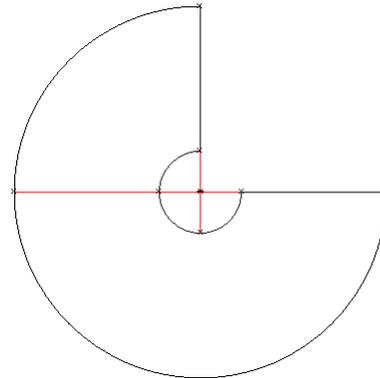
- 24.** Choose Arc (AR) and SNAP to point1, SNAP to point 2, and SNAP to point 3.



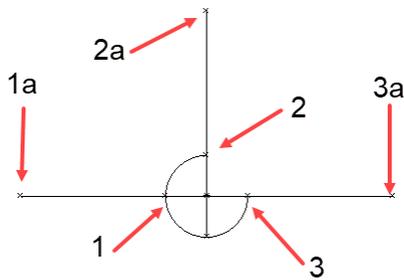
Draw Outer Arc for Length of Pattern

- 15.** Choose Line (LI) and SNAP to point 1.
16. Hold the Control key down and drag the mouse to the LEFT.
17. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 1a.
18. Choose Line (LI) and SNAP to point 2.
19. Hold the Control key down and drag the mouse UP.
20. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 2a.
21. Choose Line (LI) and SNAP to point 3.
22. Hold the Control key down and drag the mouse to the RIGHT.
23. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 3a.

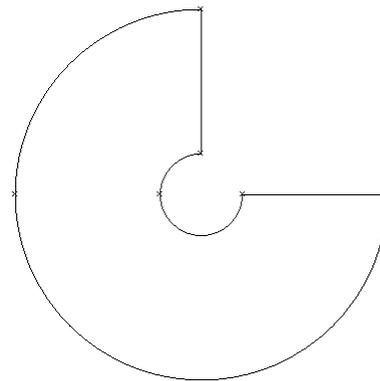
- 25.** Select and delete the lines and the mid point as shown.



Delete Selected Lines and Mid Point



Draw Lines for Length of Pattern



Finished 3/4 Circle

One Half Circle

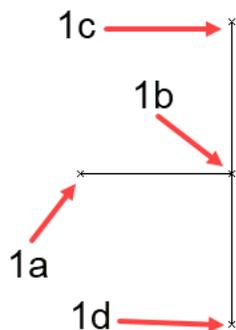
The following instructions will draft one half of a full circle pattern. The seams can be placed at center front/center back or at the sides of the body.

1. Choose Calculator from the Utilities menu.
2. Enter the length of the joining seam.
3. Choose 1/2 Circle and press the Circle -> Radius button to calculate the radius.
4. Choose Line (LI) and CLICK to place the first point of the line.
5. Hold the Control key down and drag the mouse to the right.
6. Release the Control key, type the **calculated radius * 2** on the keyboard, and press the Enter key to place the second point of the line.
7. Follow the instructions for the Full Circle with Seams starting with step 6 to complete the Half Circle pattern.

One Quarter Circle

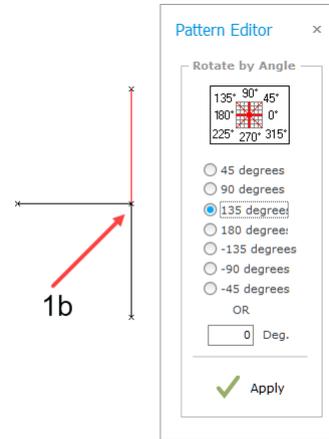
The following instructions will draft one quarter of a full circle pattern. The seams can be placed at center front/center back or at the sides of the body.

1. Choose Calculator from the Utilities menu.
2. Enter the length of the joining seam.
3. Choose 1/4 Circle and press the Circle -> Radius button to calculate the radius.
4. Choose Line (LI) and CLICK to place point 1a, the first point of the line.
5. Hold the Control key down and drag the mouse to the right.
6. Release the Control key, type the **calculated radius** on the keyboard, and press the Enter key to place point 1b, the second point of the line.
7. Choose Line (LI) and SNAP to the point 1b.
8. Hold the Control key down and drag the mouse UP.
9. Release the Control key, type the **calculated radius** on the keyboard, and press the Enter key to place point 1c, the second point of the line.
10. Choose Line (LI) and SNAP to the point 1b.
11. Hold the Control key down and drag the mouse DOWN.



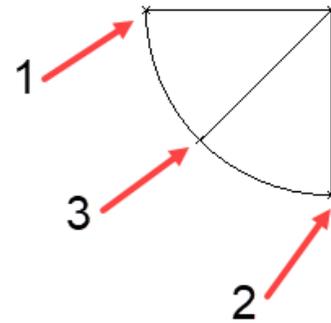
Draw Horizontal and Vertical Lines

12. Release the Control key, type the **calculated radius** on the keyboard, and press the Enter key to place point 1d, the second point of the line.
13. Select the top vertical line and choose Rotate by Angle (RA).
14. SNAP to point 1b.
15. Select to rotate 135 degrees and press Apply.



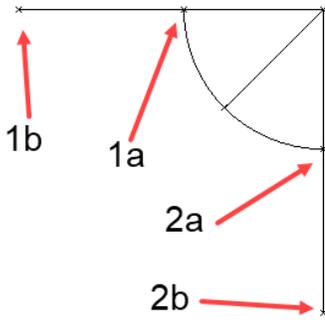
Rotate by Angle

16. Choose Arc (AR). SNAP to point 1, SNAP to point 2, and SNAP to point 3. The arc will be drawn to the length of the joining seam measurement.



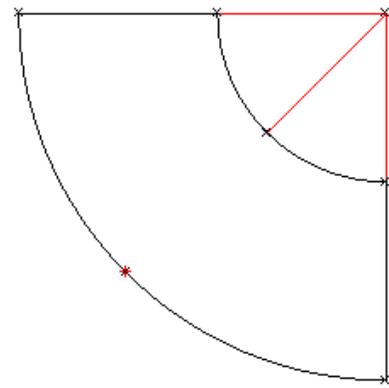
Draw Inner Arc for Joining Seam

17. Choose Line (LI) and SNAP to point 1a.
18. Hold the Control key down and drag the mouse to the LEFT.
19. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 1b.
20. Choose Line (LI) and SNAP to point 2a.
21. Hold the Control key down and drag the mouse to the DOWN.
22. Release the Control key, type the desired finished length for the pattern on the keyboard, and press the Enter key to place point 2b.

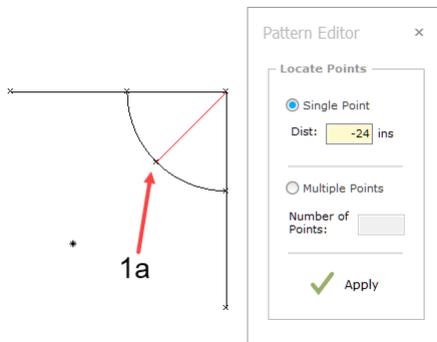


Draw Lines for Length

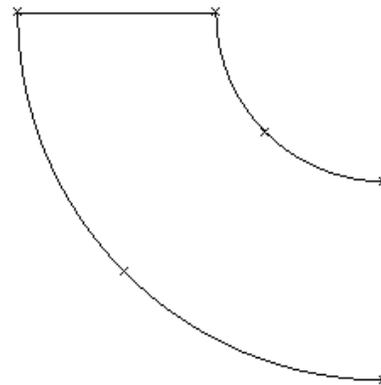
- 23. Select the line shown and choose Locate Points (LP).
- 24. SNAP to point 1a.
- 25. Enter the finished length as a NEGATIVE number and press apply.



Delete Selected Lines and Point

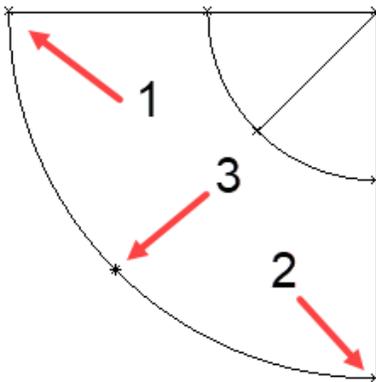


Draw Center Line for Length



Finished 1/4 Circle Pattern

- 26. Choose Arc (AR) and SNAP to point1, SNAP to point 2, and SNAP to point 3.



Draw the Outer Arc for Length of Pattern

- 27. Select and delete the lines and the point as shown.

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