

Measurements/Geometry: Homemaker – Seamstress

Lori Purcell

Job Description: All around handywoman: painter, carpenter, seamstress, cook, and yard and home maintenance.

Problem:

A homemaker wants to save money by making bedroom curtains rather than buying them. Using the following information, determine how much fabric she will need and how much the fabric will cost.

Window dimensions: 6' wide, 4' long. The finished width of the curtains will be 3 times the window width.

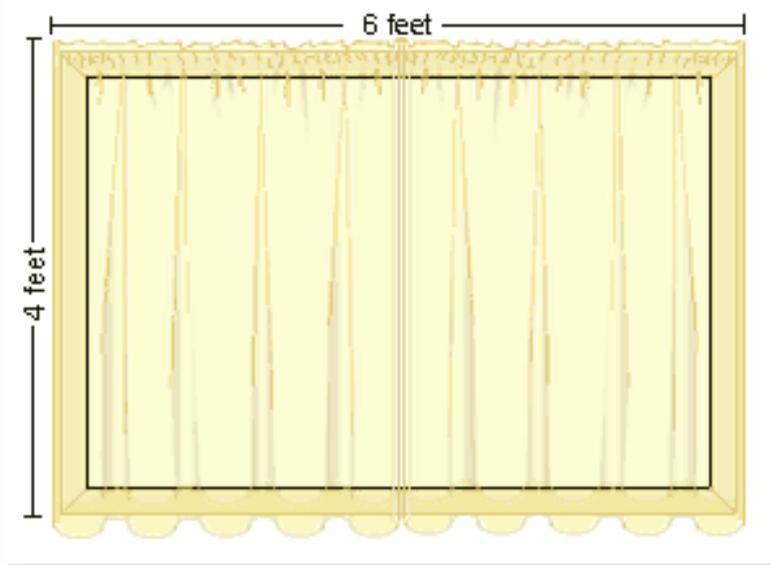
The curtains will have two gathered sections with a 3" hem at the bottom and a 1" hem on each side.

The uncut fabric is 54" wide and costs \$15.99 per yard.

Fabric is sold by the yard with partials in $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{3}$ yard.

You will need to add $\frac{1}{2}$ inch for seam allowances on sides, top and bottom. A seam is where the fabric is sewn together; the allowance is the material that is folded back on either side of the seam.

Add 6" for curtain-rod pocket at the top.



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Solution:

1. Find the dimensions of the window in inches.

Window width: $6 \times 12 = 72"$

Window length: $4 \times 12 = 48"$

2. Curtain width: the curtains will be 3 times the width of the window.

$72" \text{ wide} \times 3 = 216" \text{ total width of the curtains}$

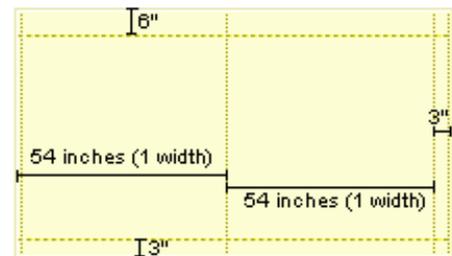
$216" \div 2 \text{ sections} = 108" \text{ width of each section}$

3. Add the side hems and seam allowances to the width of one section.

$108" + 2" \text{ (2 side hems)} + 1" \text{ (2 seam allowances)} = 111"$

111" represents the cut fabric width

4. Because the fabric width is 54" long, 3 fabric widths will be required for one section (111 inches). This will add another seam or 2 additional seam allowances.



The cut fabric width will now be $111" + 1" = 112"$

5. To make the curtains, 5 fabric widths will be required. (2 widths plus a few inches for each section.) Rather than buying 3 widths for each curtain, buy 2 for each curtain and share the extra width.

6. Curtain length = window length + hem + seam allowance + rod pocket

$48" + 3" + 1" + 6" = 58" \text{ (fabric length per curtain)}$

7. For the curtains, 5 lengths of fabric will be needed. Each length will be 58" long.

$58" \times 5 = 290" \div 36"/\text{yd} = 8 \text{ yards} + 2 \text{ inches}$

She must purchase 8.25 yards, since .25 is the smallest division

8. Cost of fabric: $8.25 \text{ yards} \times \$15.99 \text{ (cost per yard)} = \131.92