
Rugs

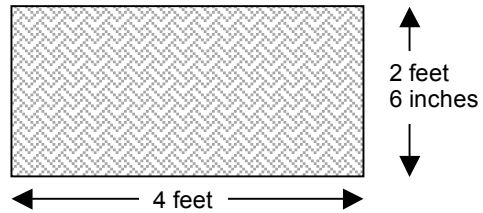
This problem gives you the chance to:

- find perimeters of shapes
 - use Pythagoras' Rule
-

Hank works at a factory that makes rugs.

The edge of each rug is bound with braid. Hank's job is to cut the correct length of braid for each rug.

1. The factory makes a rectangular rug that is 4 feet long and 2 feet 6 inches wide.

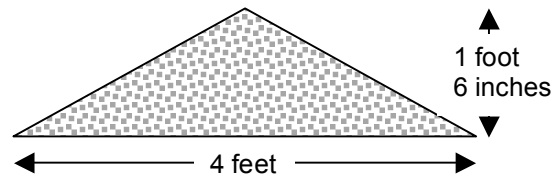


How much braid will Hank need to cut to go all the way around this rug?

_____ feet

Show your work.

2. The factory makes a triangular rug. It is an isosceles triangle 4 feet wide with a perpendicular height of 1 foot 6 inches.



How much braid will Hank need to cut to go all the way around this rug?

_____ feet

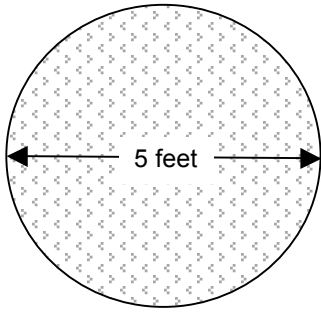
Show your work.

3. The factory also makes a circular rug that has a diameter of 5 feet.

How much braid will Hank need to go all the way around this circular rug? Give your answer in whole feet.

$\begin{aligned} \text{The circumference of a circle} &= 2\pi r \\ \text{The area of a circle} &= \pi r^2 \end{aligned}$
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_____ feet



Show your work.

4. There are plans to make a semi-circular rug which also has a diameter of 5 feet. Hank thinks that this rug will need half as much braid as the circular rug.

Explain why Hank is not correct.

How much braid will this rug need? _____ feet

Task 2: Rugs	Rubric	
<p>The core elements of performance required by this task are:</p> <ul style="list-style-type: none"> find perimeters of shapes use Pythagoras' Rule <p>Based on these, credit for specific aspects of performance should be assigned as follows</p>	points	section points
<p>1. Gives a correct answer: 13 feet</p> <p>and shows correct work such as: $2 \times (4 + 2.5)$</p>	1	1
<p>2. Gives a correct answer: 9 feet</p> <p>Shows correct work such as: Attempts to use the Pythagorean Rule. $x^2 = 2^2 + 1.5^2 = 6.25$ $x = 2.5$ $2.5 + 2.5 + 4$ Addition of sides.</p>	1 1 1ft	3
<p>3. Gives a correct answer: 16 feet or 5π feet</p> <p>Shows correct work such as: $5 \times \square$</p>	1 1	2
<p>4. Gives a correct explanation such as:</p> <p>The curved part would be half the length of the circumference of the circle but you would need to add on 5 feet for the straight edge.</p> <p>Gives correct answer: 13 feet</p>	1 1	2
Total Points		8