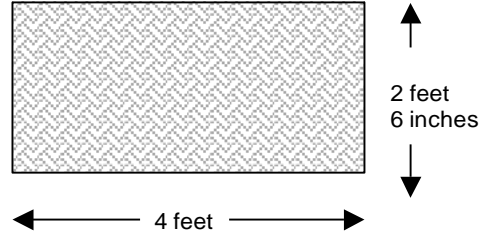Name: _____ Date: _____

Rugs

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.

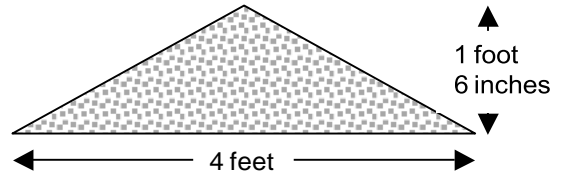**1.** The factory makes a rectangular rug that is 4 feet long and 2 feet 6 inches wide.

2 feet
6 inches

4 feet

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.

1 foot
6 inches

4 feet

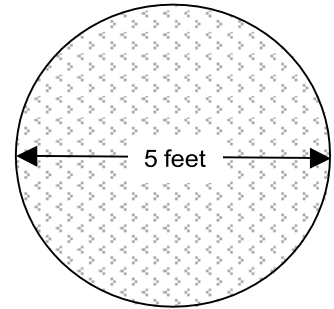How much braid will Hank need to cut to go all the way around this rug?

_____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.

> *The circumference of a circle = 2πr*
> *The area of a circle = πr²*

_____ feet

Show your work.

5 feet

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

The core elements of performance required by this task are: • find perimeters of shapes • use Pythagoras' Rule Based on these, credit for specific aspects of performance should be assigned as follows	points	section points
1. Gives a correct answer: **13** feet **and** shows correct work such as: 2 x (4 + 2.5)	1	1
2. Gives a correct answer: **9** feet 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.	1 1 1ft	3
3. Gives a correct answer: **16** feet or 5π feet Shows correct work such as: 5 x n	1 1	2
4. Gives a correct explanation such as: 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. Gives correct answer: 13 feet	1 1	2
Total Points		**8**