

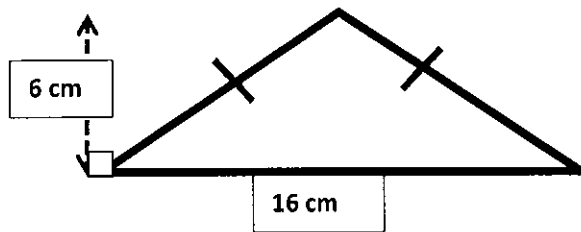
## COLLABORATIVE ACTIVITY

Pythagorean Application TASK  
G08Unit3

Name \_\_\_\_\_

**For the three problems below determine the mistakes and show a corrected method for finding the answer. Be sure to give sufficient details to demonstrate your knowledge.**

- 1] John found the area of the triangle by performing the following mathematics. Determine where John made a mistake and describe a method that would have gotten him the correct answer.

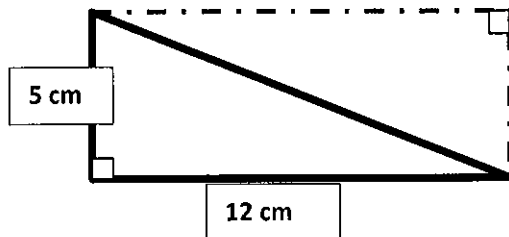


### JOHN'S CALCULATIONS

$$\begin{array}{r}
 A = 6\text{cm} \times 16\text{cm} \\
 16 \\
 \times 6 \\
 \hline
 36 \\
 60 \\
 \hline
 96
 \end{array}$$

AREA OF THE TRIANGLE = 96 cm<sup>2</sup>

- 2] Jan finds the perimeter of this triangle by performing the following calculations. Determine where Jan made a mistake and describe a method that would have gotten the correct answer.



### JAN'S CALCULATIONS

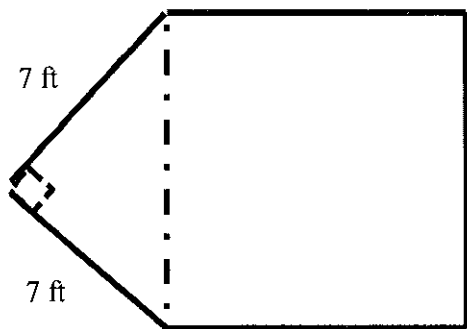
$$\text{Perimeter} = L+L+L$$

$$\begin{array}{r}
 5\text{ cm} \\
 + 12\text{ cm} \\
 + 17\text{ cm} \\
 \hline
 34\text{ cm}
 \end{array}$$

PERIMETER OF THE TRIANGLE IS 34 cm.

Pythagorean Application TASK  
G08Unit3

- 3] Joshua finds the perimeter of the following composite figure composed of a square and right triangle so that a braid may be cut to install around its outer edge. Determine what is wrong with his calculations and how to find the correct length.



**JOSHUA'S CALCULATIONS**

Hypotenuse is  $\sqrt{7 + 7} = \sqrt{14}$

Perimeter of pentagon is

$$7 + \sqrt{14} + \sqrt{14} + \sqrt{14} + 7 =$$

$$7 + \sqrt{42} + 7 =$$

$$14 + \sqrt{42} = 14 + 6.48 =$$

PERIMETER IS  
APPROXIMATELY 20.48 ft

- 4] Which error was hardest to find? What did you learn about using the Pythagorean Theorem from this lesson?

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