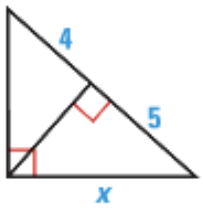
Geometry Honors
Unit 8: Similarity within Triangles
8.2a Altitude Similarity Theorem

Mathematician: _____
Period:_____

LEVEL: EMERGING

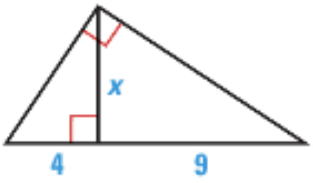
Directions: Find the **exact** value of the indicated variable.

1)



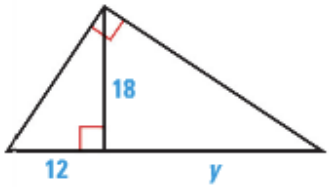
$x =$ _____

2)



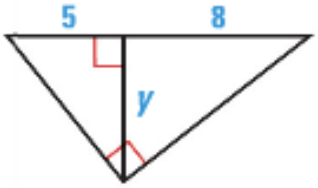
$x =$ _____

3)



$y =$ _____

4)

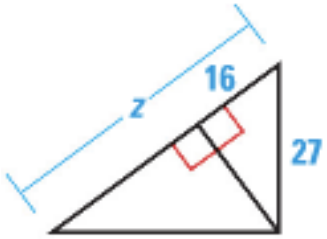


$y =$ _____

LEVEL: PROFICIENT

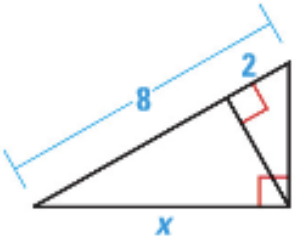
Directions: Find the **exact** value of the indicated variable.

5)



$x =$ _____

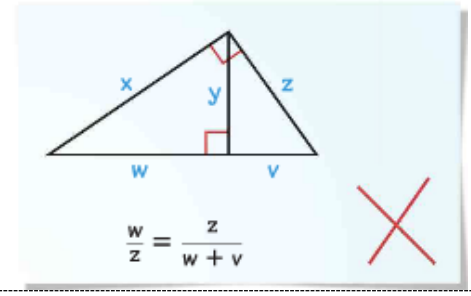
6)



$x =$ _____

Directions: Describe and correct the error in writing a proportion for the given diagram.

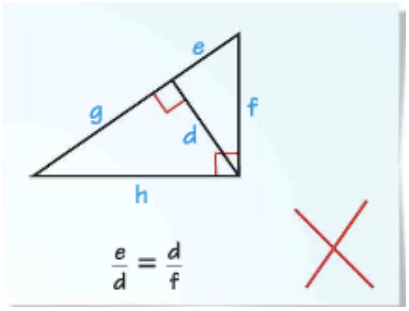
7)



Describe the error:

Correct work:

8)



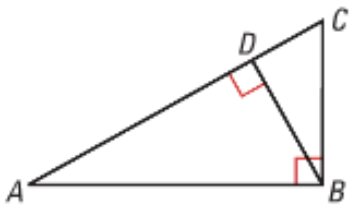
Describe the error:

Correct work:

9) Use the diagram at the right. Determine which proportion is false.

(A) $\frac{DB}{DC} = \frac{DA}{DB}$ (B) $\frac{CA}{AB} = \frac{AB}{AD}$

(C) $\frac{CA}{BA} = \frac{BA}{CA}$ (D) $\frac{DC}{BC} = \frac{BC}{CA}$



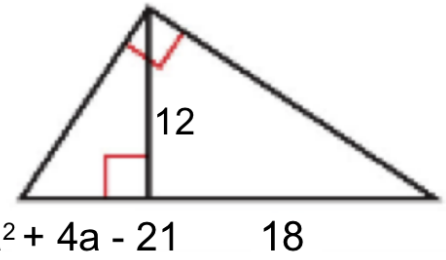
10) The peak of the doghouse shown forms a right angle. Use the given dimensions to find the height of the roof.

Roof Height: _____

LEVEL: MASTERY

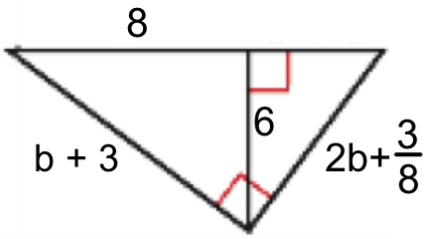
Directions: Find the indicated value(s). Round decimal answers to the nearest tenth.

11)



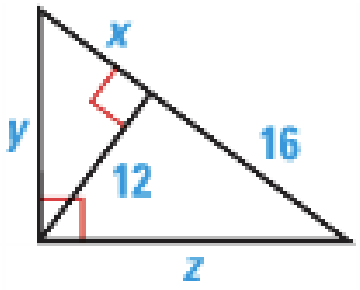
$a =$ _____

12)



$b =$ _____

13)



Sum of x, y, and z = _____