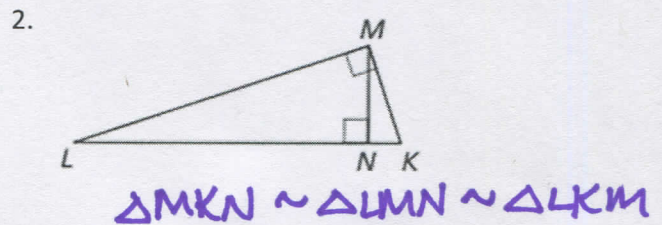
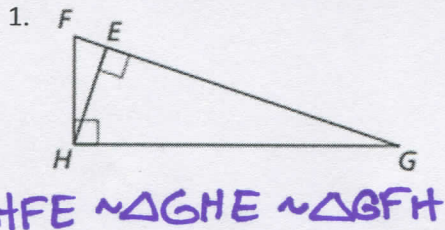


9.3 Similar Right Triangles CYU

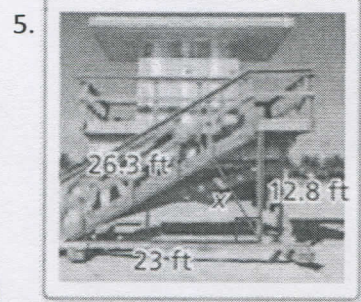
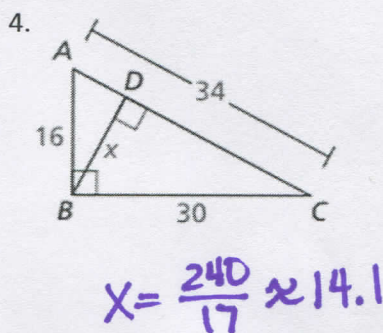
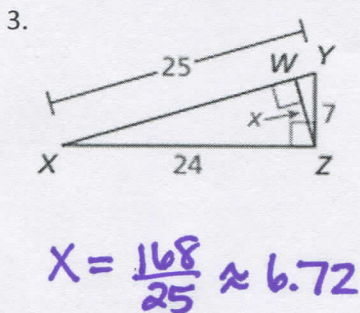
Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Writing similarity statements	1, 2		
Solving right triangles	3	4	5
Geometric Mean	6	7	8
Leg Theorem	9		
Altitude Theorem		10	11
Modeling with Mathematics			12
Mathematical Connections	13	14	15, 16
Making an argument			17

Identify the similar triangles by writing the similarity statement.



Find the value of x. Show all work for full credit.



Find the geometric mean of the two numbers. Show all work for full credit.

6. 8 & 32

16

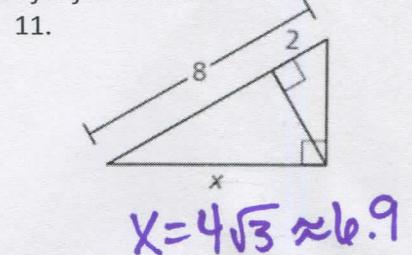
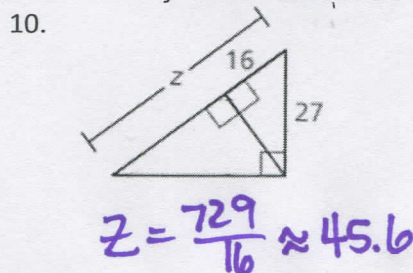
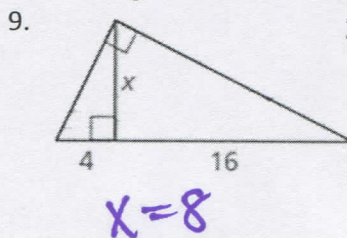
7. 25 & 35

$5\sqrt{35}$
 ≈ 29.6

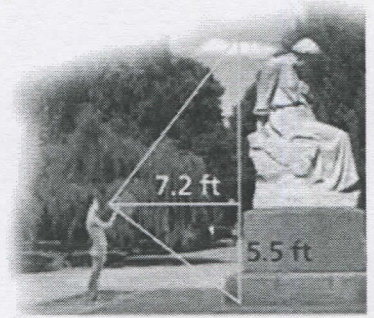
8. 24 & 45

$6\sqrt{30}$
 ≈ 32.9

Use the Leg and Altitude Theorems to find the value of the variable. Show all work for full credit.



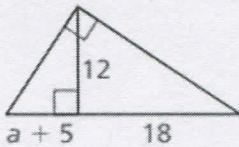
12. **MODELING WITH MATHEMATICS** You want to determine the height of a monument at a local park. You use a cardboard square to line up the top and bottom of the monument, as in the picture provided. Your friend measures the vertical distance from the ground to your eye and the horizontal distance from you to the monument. Approximate the height of the monument.



$$\approx 14.9 \text{ ft}$$

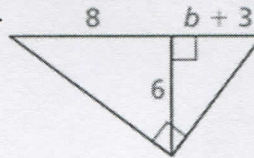
MATHEMATICAL CONNECTIONS Find the value(s) of the variable. Show your set up to earn full credit.

13.



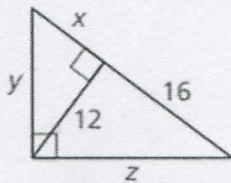
$$a = 3$$

14.



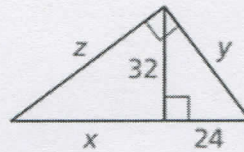
$$b = \frac{3}{2} = 1.5$$

15.



$$\begin{aligned} x &= 9 \\ y &= 15 \\ z &= 20 \end{aligned}$$

16.



$$x = \frac{128}{3} \approx 42.7$$

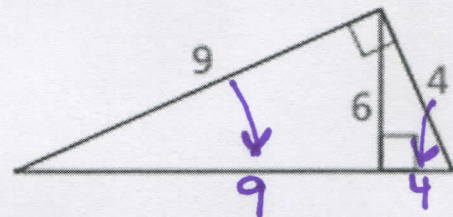
$$y = 40$$

$$z = \frac{160}{3} \approx 53.3$$

17. **MAKING AN ARGUMENT** Your friend claims the geometric mean of 4 and 9 is 6, and then labels the triangle, as shown. Is your friend correct? Explain your reasoning.

No.

$$\frac{4}{x} = \frac{x}{9} = 6$$



CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

●	●	●	●	●	●	●	
1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!

