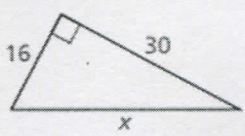


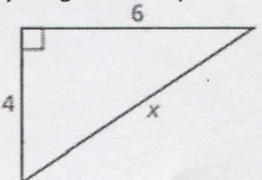
9.1 Pythagorean Theorem CYU

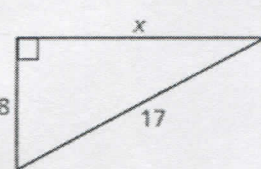
Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question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

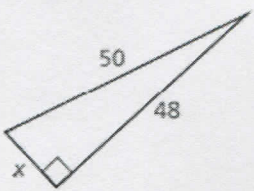
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Solving right triangles	1 - 3	5, 15	4, 16
Pythagorean Triples	1 - 3	5, 15	4, 16
Pythagorean Theorem	6	7, 15	16
Error Analysis	6	7	
Modeling with Mathematics	8		
Pythagorean Inequality Theorem	9, 12	10, 13	11, 14
Triangle Inequality Theorem (Is it a triangle?)	12	13	14
Area of Isosceles Triangles		15	16

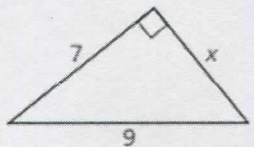
Find the value of x . Then tell whether the side lengths for a Pythagorean triple.

- 

$x = 34$; yes
- 

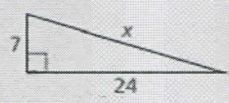
$x = 2\sqrt{13}$; no
- 

$x = 17$; yes
- 

$x = 14$; yes
- 

$x = 4\sqrt{2}$; no

ERROR ANALYSIS Describe and correct the error in using the Pythagorean Theorem.

6.  **X**

$$c^2 = a^2 + b^2$$

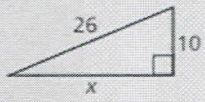
$$x^2 = 7^2 + 24^2$$

$$x^2 = (7 + 24)^2$$

$$x^2 = 31^2$$

$$x = 31$$

Exponents cannot be distributed as shown in line 3.
 $x = 25$

7.  **X**

$$c^2 = a^2 + b^2$$

$$x^2 = 10^2 + 26^2$$

$$x^2 = 100 + 676$$

$$x^2 = 776$$

$$x = \sqrt{776}$$

$$x \approx 27.9$$

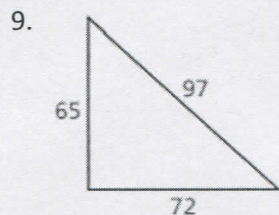
Because 26 is the hypotenuse, it should be "c".
 $x = 24$

8. **MODELING WITH MATHEMATICS** The fire escape forms a right triangle, as shown. Use the Pythagorean Theorem to approximate the distance between the two platforms.

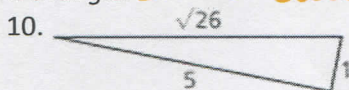


$\approx 14.1 \text{ ft}$

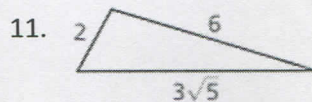
Determine if the triangle is a right triangle. *Show work!*



yes



yes



no

Verify that the segment lengths for a triangle. Is the triangle acute, right, or obtuse? *Show work!*

12. 5.3, 6.7, & 7.8

13. 10, 15, & $5\sqrt{13}$

14. 4.1, 8.2, & 12.2

$a+b > c$
 $a+c > b$
 $b+c > a$

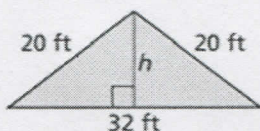
yes; acute

yes; right

yes; obtuse

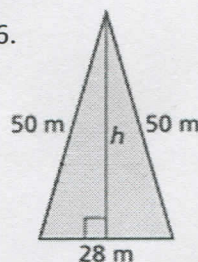
Find the area of the isosceles triangle.

15.



$A = 192 \text{ ft}^2$

16.



$A = 672 \text{ m}^2$

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!

