

9.1 – 9.3 Quiz Review CYU

Pythagorean Inequalities and Triples, Special Right Triangles, and Similar Triangles

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 - 15	16 - 24	
Pythagorean Triple	1 - 4	5 - 15	16 - 24
Classifying Triangles: Obtuse, Right, Acute	A, B		
Pythagorean Theorem	25, 26		
Is it a triangle?	B		
45-45-90 Proportions		25, 26	
30-60-90 Proportions		27, 28	
Writing similarity statements		32 - 37	
Geometric Mean, Altitude & Leg Theorem		32 - 37	
Geometric Mean	29 - 31		
Right Triangle Similarity Theorem		32 - 37	

9.1 Pythagorean Theorem

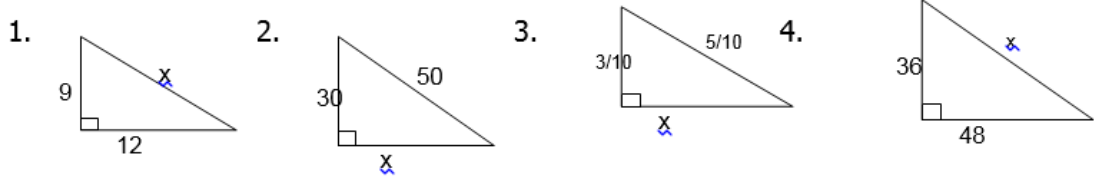
Pythagorean Theorem can be used for more than just finding the lengths of a right triangle. It can also determine whether a triangle is obtuse, right, or acute.

A. Summarize the rule that determines if the triangle is obtuse, right or acute.

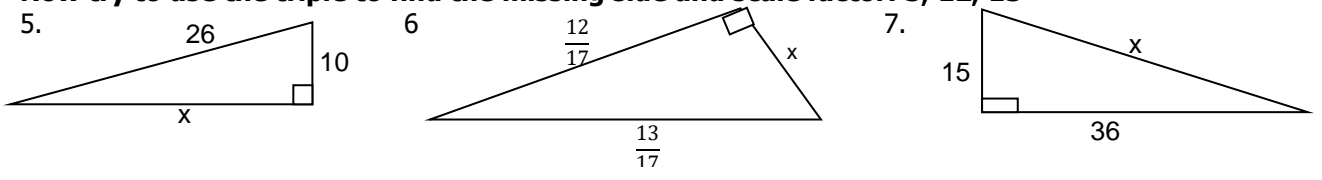
B. Is it a triangle? If yes, classify the triangles below.

1. 4, 5, 5 _____
2. 2, 10, 11 _____
3. 3, 4, 5 _____

Find the missing sides below by using the triple 3, 4, 5.

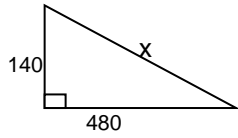


Now try to use the triple to find the missing side and scale factor: 5, 12, 13

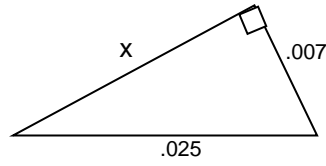


7, 24, 25

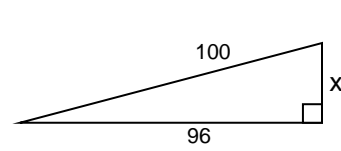
8.



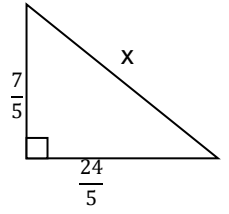
9.



10.

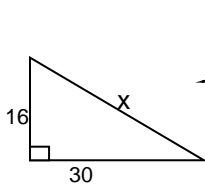


11.

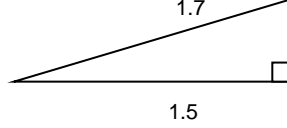


8, 15, 17

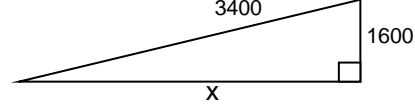
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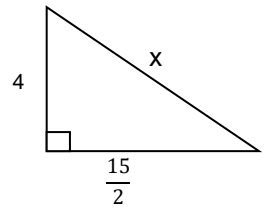
13.



14.

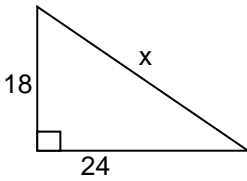


15.

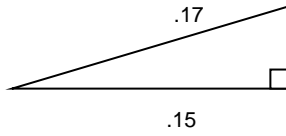


Now try these mixed up! You decide..... 3,4,5; 5,12,13; 7,24,25; or 8,15,17 !! Find x.

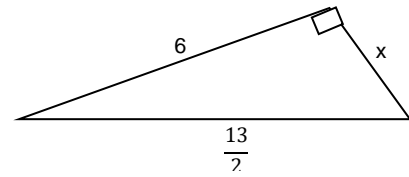
16. _____



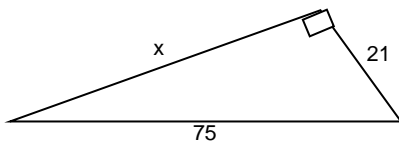
17. _____



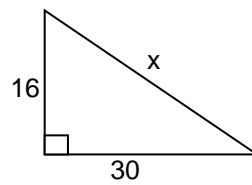
18. _____



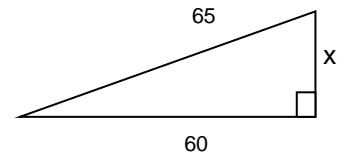
19. _____



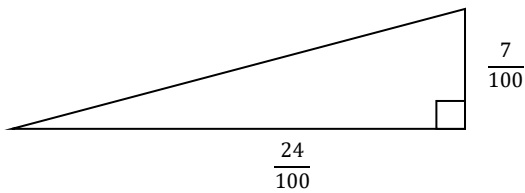
20. _____



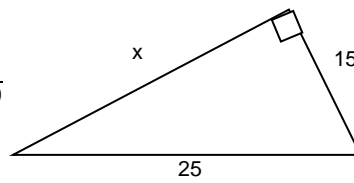
21. _____



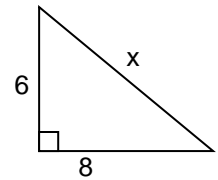
22. _____



23. _____

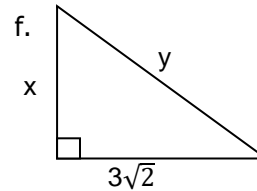
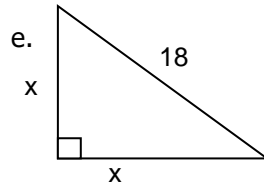
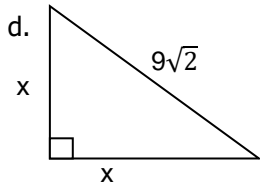
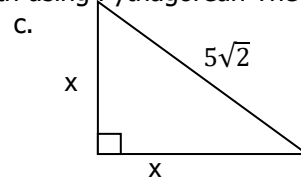
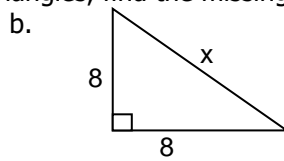
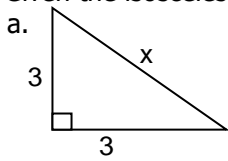


24. _____



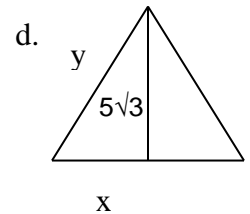
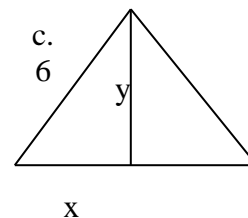
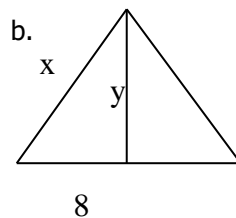
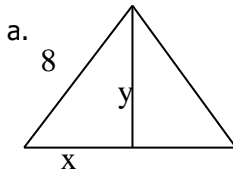
9.2 Special Right Triangles

25. Given the isosceles right triangles, find the missing length using Pythagorean Theorem.



26. The above triangles are all $45^\circ - 45^\circ - 90^\circ$ triangles, are they all similar? Draw and label the base triangle that will always help you set up the proportion to find missing side lengths.

27. Given the equilateral triangles with **altitudes**, find the variables using the $30^\circ - 60^\circ - 90^\circ$ proportions.



28. Are all $30^\circ - 60^\circ - 90^\circ$ triangles above similar? Draw and label the base triangle that will always help you set up the proportion to find missing side lengths.

9.3 Similar Right Triangles

Find the geometric mean of the two numbers.

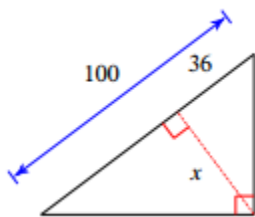
29. 3 & 12

30. 4 & 14

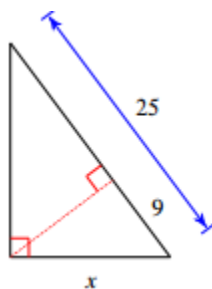
31. 10 & 24

Find the missing length indicated. Leave your answers exact (in simplest radical form).

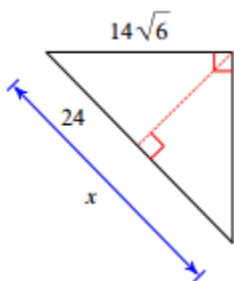
32.



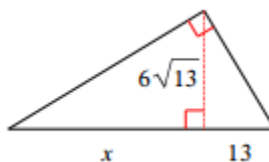
33.



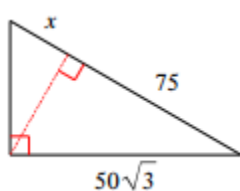
34.



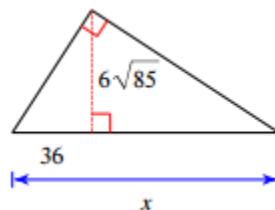
35.



36.



37.



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.

