Name _____ Date _____ Pd _____

9.1 - 9.3 All Mixed Up DAY FIVE CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Solving Right Triangles	1, 2	2, 3, 6	4, 9 – 12, 21, 23
Pythagorean Triple	1 - 12		
Classifying Triangles: Obtuse, Right, Acute		13 - 15	21
Pythagorean Theorem	1, 2, 6, 7		23
Real-World Application			21, 22, 23
Is it a triangle?	13 - 15		
45-45-90 Proportions	2, 7		
30-60-90 Proportions		3, 10	
Area of polygons		16, 17	22
Properties of polygons	2, 3, 6, 16, 17		22, 23
Writing similarity statements		4, 5, 8, 9, 11	
Geometric Mean, Altitude & Leg Theorem		4, 5, 8, 9, 11	23
Geometric Mean	18 - 20		
Right Triangle Similarity Theorem		4, 5, 8, 9, 11	23

Solve the triangle for all variables. Then determine if the side lengths create a Pythagorean triple. Show all work for full credit.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.
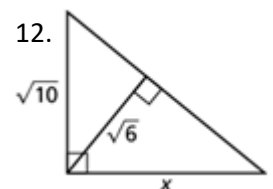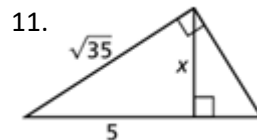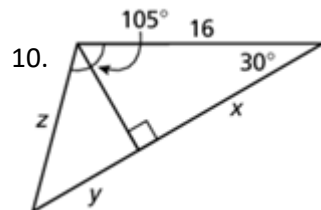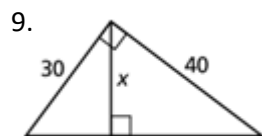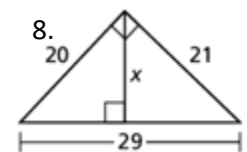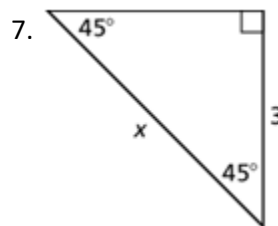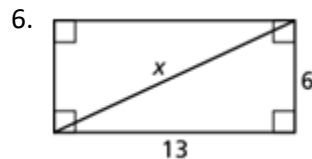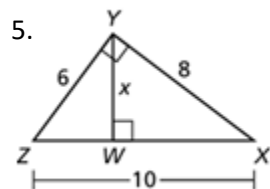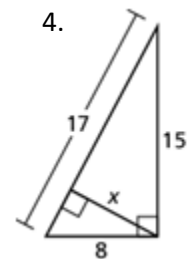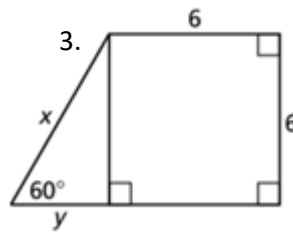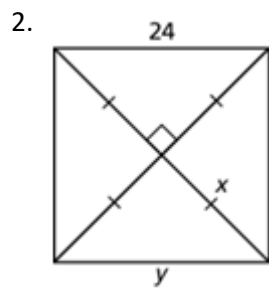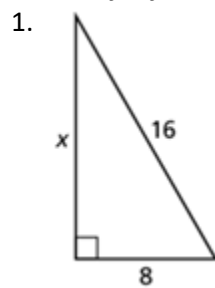
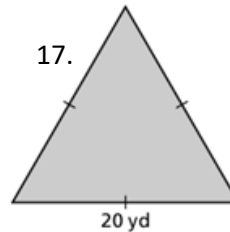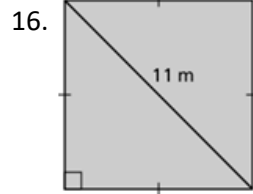*Tell whether the triangle creates a triangle. If yes, then classify the triangle as acute, right, or obtuse. Show all work for full credit.*

13. 3.1, 3.4, 1.6

14. $\sqrt{7}, 2\sqrt{3}, \sqrt{19}$

15. 14, 48, 50

Use properties of polygons to find the area of the figure below. Round decimal answers to the nearest tenth.

16.

11 m

17.

20 yd

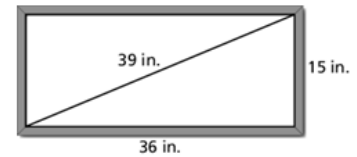*Find the geometric mean of the two numbers.*

18. 24 & 12

19. 16 & 25

20. $\frac{1}{2}$ & 40

Real-World Application

21. You can construct a picture frame with a diagonal piece attached to the back for support, as shown. Can you tell from the dimensions whether the corners of the frame are right angles? Explain.

39 in.   15 in.

36 in.

22. You build a two-person tent, as shown. How many square feet of material is needed to make the tent, assuming the tent has a floor?

4 ft

6 ft

60°
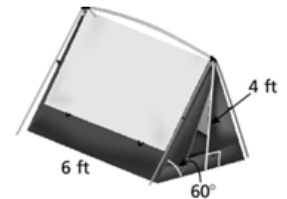
23. You build a cornhole game. The game is constructed from a sheet of plywood supported by two boards. The two boards form a right angle and their lengths are 12 inches and 46.5 inches.
   a) Find the length x of the plywood to the nearest inch.

   x in.

   b) You put in a support that is the altitude y to the hypotenuse of the right triangle. What is the length of the support? *Round your answer to the nearest tenth.*

   y   12 in.

   46.5 in.
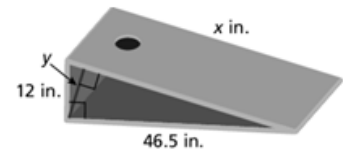
   c) Where does the support attach to the plywood? Explain.

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!