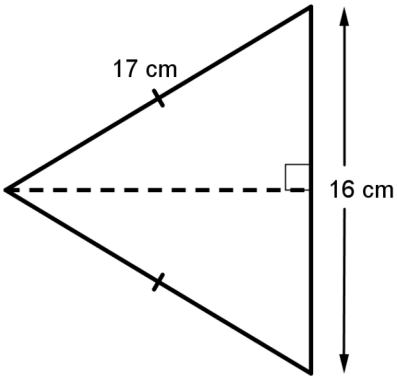
Geometry Chapter 5, 7 Cumulative Review Name _____

1. Determine if the three given sides form a Pythagorean Triple.

a. 5, 12, 13 b. 6, 11, 14 c. $7, 7\sqrt{3}, 14$

2. Find the area of the triangle.



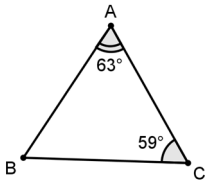
3. Determine if a triangle can be formed from the given side lengths. If a triangle can be formed, classify the triangle by its angles.

a. 2, 8, 5 b. 13, 10, 16 c. 40, 59, 29

4. Two side lengths of a triangle are 20 and 27. Use an inequality statement to describe the possible lengths of the third side.

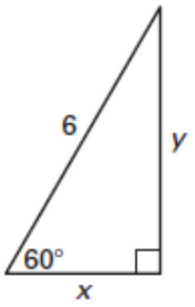
_____ $< third\ side\ length <$ _____

5. Order the SIDES from shortest to longest. Explain your reasoning.



6. Solve for x and y. Give an exact answer and an approximate answer rounded to one decimal place.

a.



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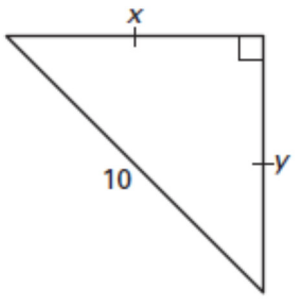
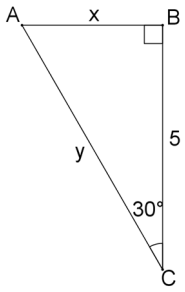
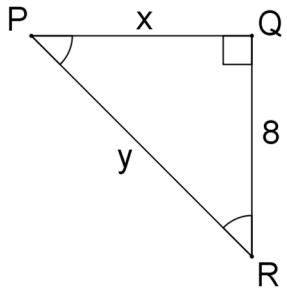


c.

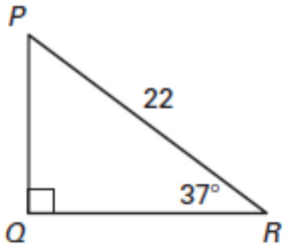


d.

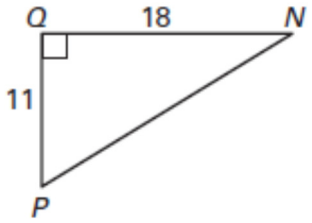


7. Solve the right triangle for all missing sides and angles. Find approximate answers rounded to one decimal place.

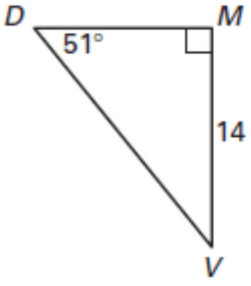
a.



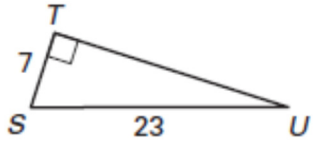
b.



c.



d.



8. A train is traveling up a grade with an angle of elevation of 2°. It travels 1 mile (5280 feet).
   a. Draw a diagram to represent this situation.

   b. What is the vertical change in feet? (Round to one decimal place)

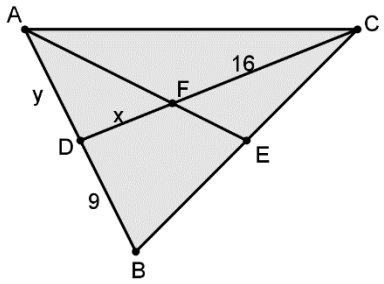
9. A submarine that is 300m below the surface of the water locates a battleship on the surface. Sonar says that the straight line distance from the submarine to the battleship is 400m.
   a. Draw a diagram to represent this situation.

   b. What is the horizontal distance from the battleship to the submarine? (Round to one decimal place)

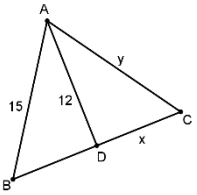
   c. What is the angle of depression at the battleship? (Round to one decimal place)

10. Use the picture at the right where $\overline{CD}$ and $\overline{AE}$ are medians of ΔABC.
   a. Solve for x and y.

   b. If $AE = 30$, then determine AF and FE.



11. Use the picture below where $\overline{AD}$ is the perpendicular bisector of $\overline{BC}$ to solve for x and y.



12. Use the picture below where $\overline{DE}$ is a midsegment of ΔABC to solve for x and y.