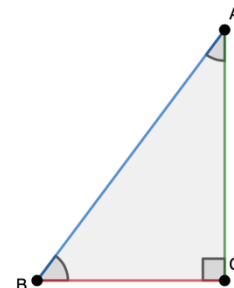Getting Triggy with It!   Name:_____

In Geometry you learned a lot about triangles and the relationships between their sides and angles. Today we're going to continue this exploration.

1. Order the sides in the triangle from smallest to largest. Then order the angles in the triangle from smallest to largest. How are these two related?
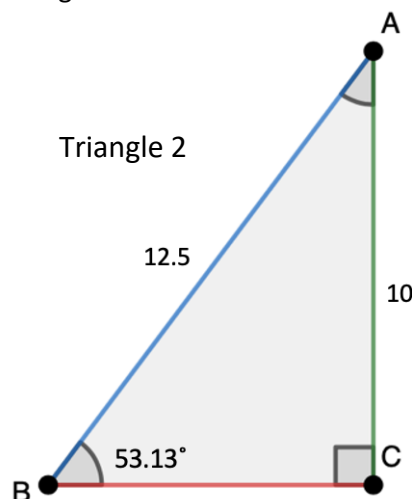

2. What relationships do you see between the two triangles below?
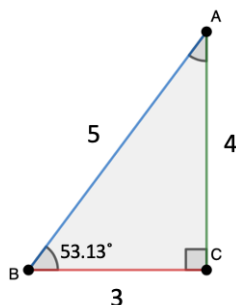
Triangle 1   Triangle 2

3. In triangle 2, what is the length of the red side? How do you know?

4. Fill out the chart below with the given ratios. Write your answer as a fraction and a decimal.

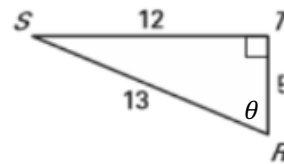|	$\dfrac{Green}{Blue}$	$\dfrac{Red}{Blue}$	$\dfrac{Green}{Red}$
Triangle 1			
Triangle 2			

5. What do you notice about the values in the table? Why do you think this happens?

6. Explain how each ratio in the table would change if we made $\angle B$ bigger but kept $\overline{BC}$ the same length (and $\angle C$ is still a right angle).
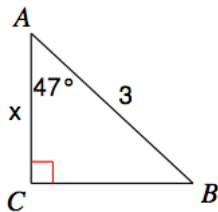
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Important Ideas:

Check Your Understanding!

1. In the triangle shown, find $\sin\theta$, $\cos\theta$, and $\tan\theta$.
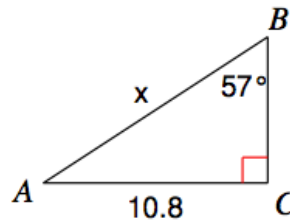
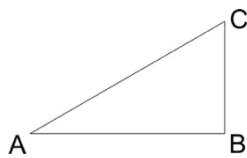2. Solve for the missing side.

   a.

   b.

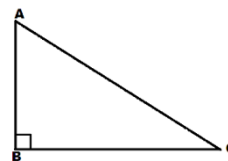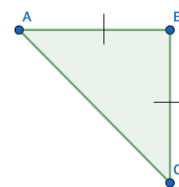3. (Multiple Choice) Which of the following right triangles could demonstrate $\tan A = \frac{5}{3}$?

   A)

   B)

   C)

   D)

4. Explain in words what the statement $\tan(11.31) = 0.2$ means.

5. If $\sin\theta = 0.75$, find one set of possible values for a, b, and c.

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