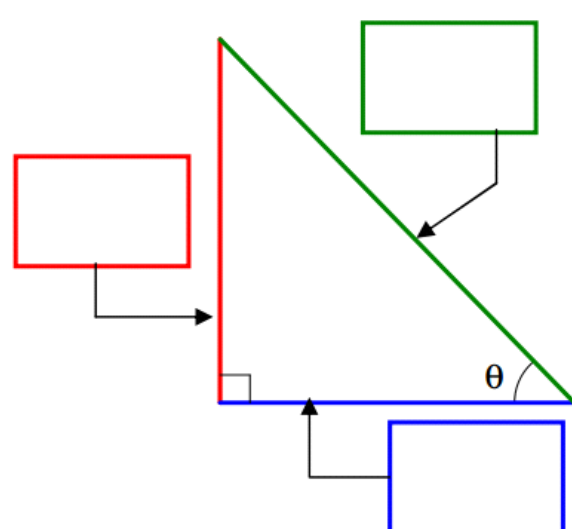


## 5-2 Trigonometric Ratios in Right Triangles Notes

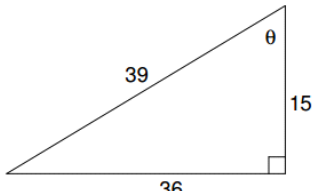
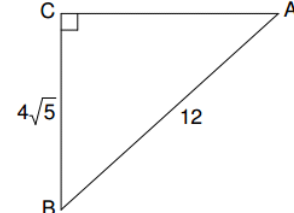
Trigonometric Ratios in Right Triangles		
Words	Symbol	Definition

The symbol \_\_\_\_\_ (called \_\_\_\_\_) is used to refer to angles or indicated angles.

You may need to use \_\_\_\_\_ to find the third side.



**Example 1: Find the trig ratios for the indicated angle  $\theta$  or angle A.**

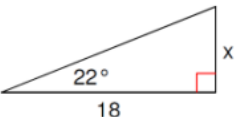
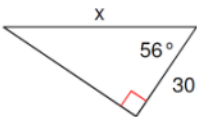
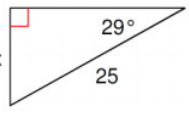
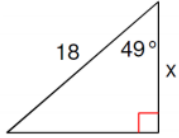
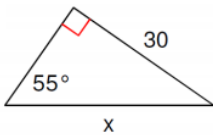
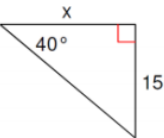
<p>a.</p> 	<p>b.</p> 	<p>c. Given <math>\tan \theta = \frac{\sqrt{3}}{3}</math>, find the other two trigonometric ratios.</p>
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### Finding a Missing Side with a Trigonometric Ratio

- With trigonometry, you only need to know \_\_\_\_\_ and \_\_\_\_\_ (other than the right angle) in order to find the \_\_\_\_\_ in a right triangle.
- Decide how the given side and given angle relates to the \_\_\_\_\_.
- Set up a(n) \_\_\_\_\_ using the appropriate \_\_\_\_\_.
- If x is on \_\_\_\_\_, then \_\_\_\_\_. → Ex:  $\tan 56 = \frac{x}{21}$
- If x is on \_\_\_\_\_, then \_\_\_\_\_. → Ex:  $\sin 72 = \frac{16}{x}$

Check Your Calculator Mode – It MUST be in DEGREES!

**Example 2: Find the missing side  $x$  for each given right triangle. Round to nearest tenth.**

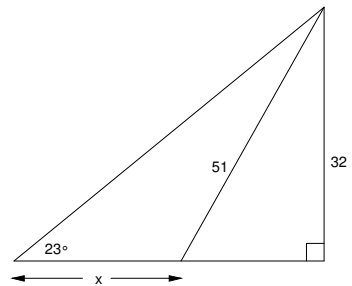
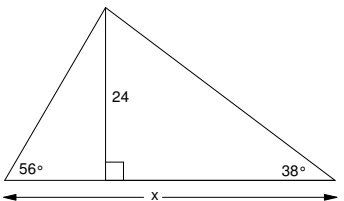
<p>a.</p> 	<p>b.</p> 	<p>c.</p> 
<p>d.</p> 	<p>e.</p> 	<p>f.</p> 

**Solving the triangle** means that you need to find \_\_\_\_\_. You will have **3 ANSWERS!**

**Example 3: Solve the triangle. Round to the nearest tenth.**

<p>a. <math>A = 33^\circ</math> and <math>b = 5.8</math></p>	<p>b. <math>B = 68^\circ</math> and <math>c = 14</math></p>
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**Example 4: Critical Thinking Examples - Find the missing side  $x$ . Round to nearest tenth.**

<p>a.</p> 	<p>b.</p> 
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