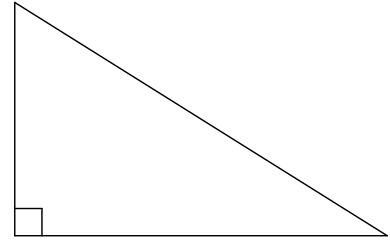


Triangle Trigonometry – Trigonometric Ratios in Right Triangles

A right triangle consists of two important features:

- 1.) _____
 - _____ which is _____
 - _____ which _____
 - _____ which is _____ to the _____



* Note → The symbol _____ (called _____) is used to refer to angles.

- 2.) _____
 - _____ which is the _____ and _____
 - _____ which are the _____
 - _____ which is the leg that is directly next to the indicated angle (θ)
 - _____ which is the leg that is directly across from the indicated angle (θ)

Words	Symbol	Definition	

- To find a missing side of a right triangle (given two sides) → must use _____

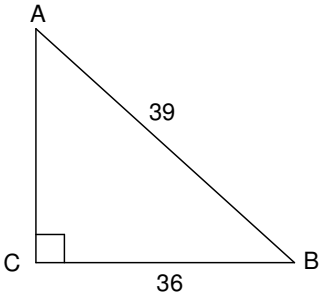
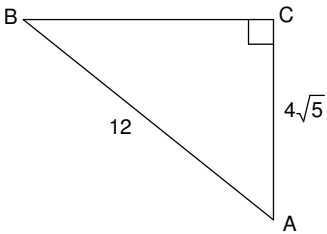
Note: You WILL have to rationalize the denominator for problems like Example 2.

Remember – Rationalizing the denominator is a way to “simplify” by having the denominator an exact root to produce a rational number (hence the name of the process)

Example 1: Let’s review on how to “Rationalize the Denominator”.

a.) $\frac{4}{\sqrt{5}}$	b.) $\frac{6}{\sqrt{3}}$	c.) $\frac{2}{4\sqrt{2}}$	d.) $\frac{48}{3\sqrt{6}}$

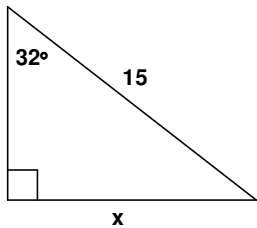
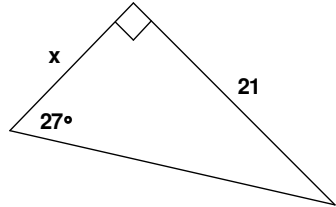
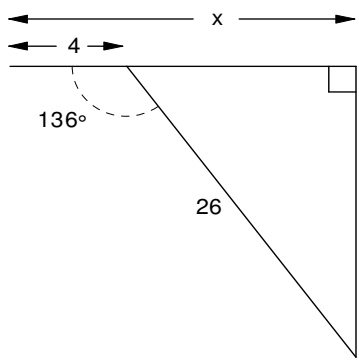
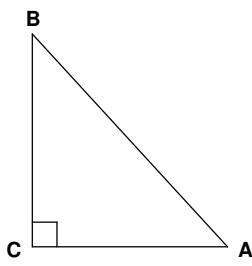
Example 2: Complete each problem (and its parts) below.

<p>a.) Find the three trigonometric ratios for angle A.</p> 	<p>b.) Find the three trigonometric ratios for angle B.</p> 	<p>c.) Given $\tan \theta = \frac{\sqrt{3}}{3}$, find the other two trig ratios.</p>
--	---	---

Things to Know When Solving Triangles → Make sure your MODE is in DEGREES!!!

- 1.) _____ or _____ will always represent _____ (Triangle = 180°)
- 2.) _____ will always represent _____
- 3.) a.) If “x” is on _____, then _____ b.) If “x” is on _____, then _____
- 4.) Round ALL sides to the nearest tenth! NO RADICALS when asked to SOLVE a triangle!!!!

Example 3: Find the value of x for a.) , b.) , and c.) but SOLVE triangle ABC for d.) and e.)

<p>a.)</p> 	<p>b.)</p> 	<p>c.)</p> 
<p>d.) Solve triangle ABC: $A = 33^\circ$, $b = 5.8$</p> 	<p>e.) Solve triangle ABC: $B = 68^\circ$, $c = 14$</p> 