

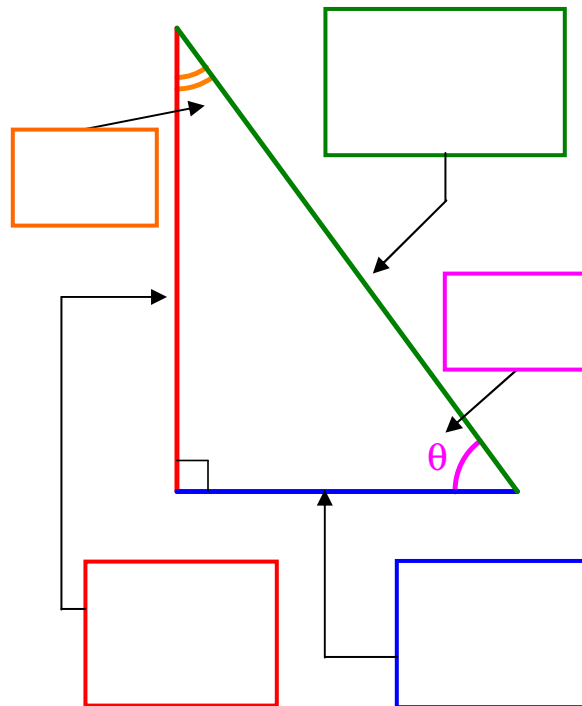
6.2 – Trigonometric Ratios in Right Triangles

The Three Basic Trigonometric Ratios in Right Triangles

Word	Abbreviation	Definition

Notes: 1.) The symbol _____ (called _____) is a _____ that is often used to refer or indicate _____.

2.) You may have to use _____ to find third side.



– **rationalizing (the denominator)** → way to _____ an expression with radicals (square roots) by NOT ALLOWING _____ (we will have to do this in Example 2) so let's review/practice this concept...

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.) $\frac{48}{3\sqrt{6}}$
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Example 2: Find the value of the three basic trigonometric ratios.

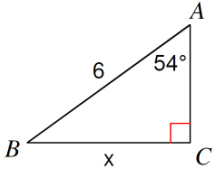
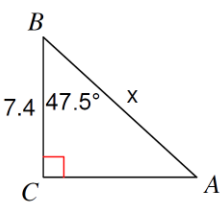
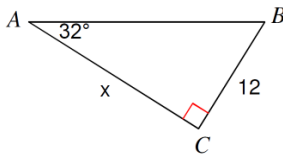
a.)	b.)	c.) Given $\tan \theta = \frac{\sqrt{3}}{3}$, find the other two trigonometric ratios.
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Check Your Calculator Mode - It needs to be in DEGREES!

Finding a Missing Side with a Trigonometric Ratio and Solving a Right Triangle

- 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: $\tan 56^\circ = \frac{x}{21}$
 - If "x" is on _____, then _____ → Ex: $\sin 72^\circ = \frac{16}{x}$
- Solving a right triangle means to _____ → will have _____
 - _____ always represent _____
 - _____ always represent _____ (which are across from its angle)
- Round all answers to NEAREST TENTH! NO RADICALS in these sets of problems!

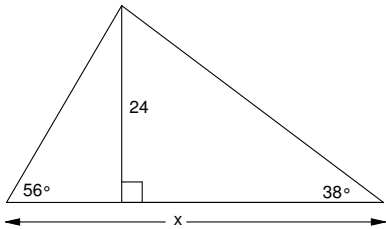
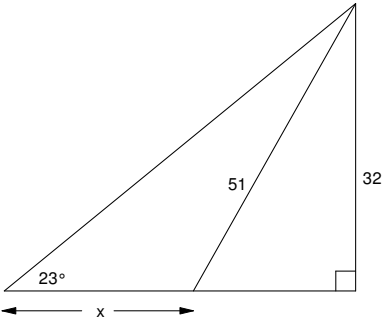
Example 3: Find the value of side x. Round to tenth place.

a.) 	b.) 	c.) 
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Example 4: Solve triangle ABC. Round to tenth place.

a.) $A = 33^\circ$ and $b = 5.8$	b.) $B = 68^\circ$ and $c = 14$
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Example 5 – Critical Thinking: Find the length of side x. Round to tenth place.

a.) 	b.) 
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