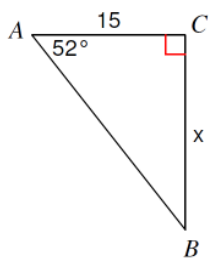
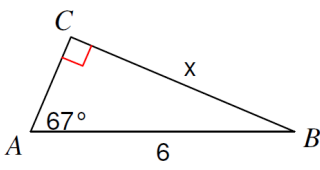
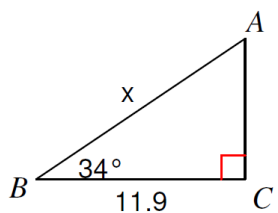
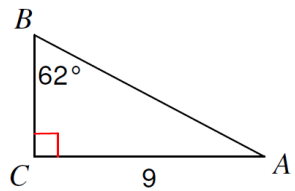


6.3 – Inverse Trigonometric Ratios in Right Triangles

Before Getting Started – Let’s Review: Trigonometric Ratios

<p>1.) Find side x.</p> 	<p>2.) Find side x.</p> 	<p>3.) Find side x.</p> 	<p>4.) Solve triangle ABC.</p> 
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Inverse Trigonometric Ratios: Use ONLY when FINDING AN ANGLE MEASUREMENT!!!

Trigonometric Ratios	Inverse Trigonometric Ratios	Calculator Keys
$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$		2nd sin (_____)
$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$		2nd cos (_____)
$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$		2nd tan (_____)

Example 1: Solve each equation by find the value of angle θ . Round to tenth place.

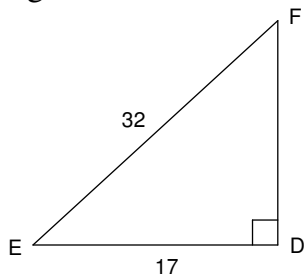
a.) $\sin \theta = \frac{\sqrt{3}}{2}$	b.) $\cos \theta = 0.7498$	c.) $\tan \theta = 2$
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Example 2: Evaluate each expression using the inverse trig ratios’ definitions.

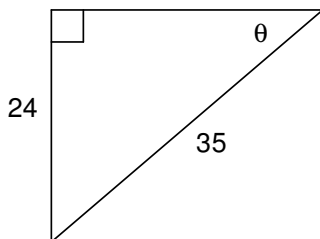
a.) $\tan \left(\tan^{-1} \frac{6}{4} \right)$	b.) $\cos (\arcsin 1)$	c.) $\sin (\cos^{-1} \frac{\sqrt{3}}{2})$	d.) $\tan (\arccos 0)$
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Example 3: Find the indicated angle. Round to nearest tenth.

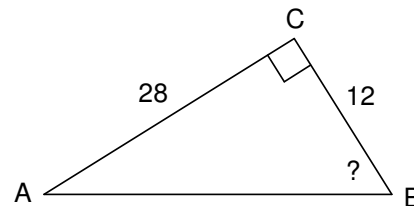
a.) Find angle E.



b.) Find angle θ .



c.) Find the angle B.



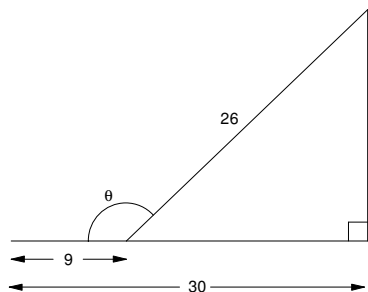
Example 4: Solve triangle ABC. Round to tenth place.

a.) $a = 12$, $b = 18$

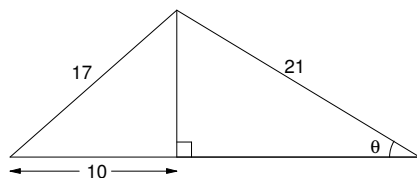
b.) $a = 23$, $c = 45$

Example 5 – Critical Thinking: Find the value of angle θ . Round to tenth place.

a.)



b.)



c.)

