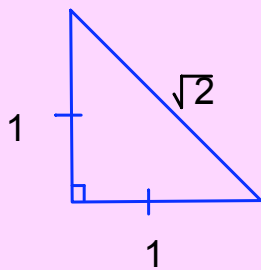


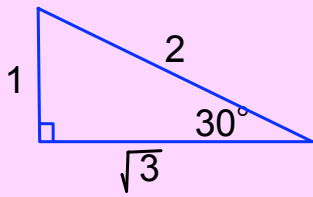
GEO Notes Lesson 9.10 "Trig Ratios"



$$\sin 45^\circ = \frac{\text{opp}}{\text{hyp}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} = .707$$

$$\cos 45^\circ$$

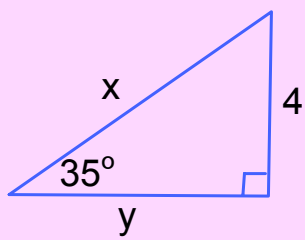
$$\tan 45^\circ$$



$$\sin 30^\circ =$$

$$\cos 30^\circ =$$

$$\tan 30^\circ =$$



Find x and y

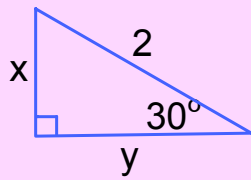
$$x: \sin 35^\circ = \frac{\text{opp}}{\text{hypo}} = \frac{4}{x}$$

$$.574 = \frac{4}{x}$$

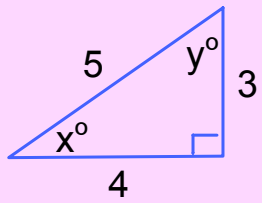
$$.574x = 4$$

$$6.97 = x \text{ (7 ft)}$$

y:



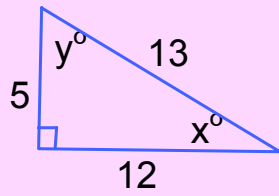
Find x and y . (You could use 30° , 60° , and 90° triangle ratios, but let's try it with trig instead.)



Find the missing angles.

$$x: \sin x = \frac{3}{5}$$

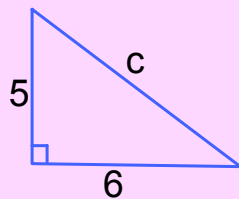
$\sin x = .6$ (use \sin^{-1} on calculator)
 $x = \text{about } 37^\circ$



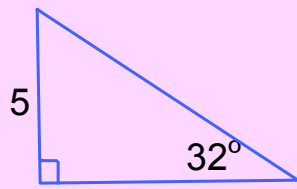
"Solving Right Triangles" means to determine all 6 parts of the triangle (the 3 angle measures and the 3 side lengths).

This is easily done if you know you have a right angle and :

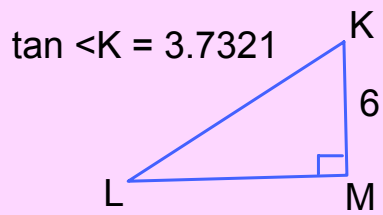
1. 2 side lengths
2. 1 side and 1 acute \angle
3. 1 side and 1 trig ratio



(Use pythagorean theorem, trig ratios and subtraction.)



(Use \sin , subtraction, and pythagorean theorem.)



(Use \tan^{-1} , subtraction, \tan , and pythagorean theorem.)