45°-45°-90°
$x \quad x \quad x\sqrt{2}$

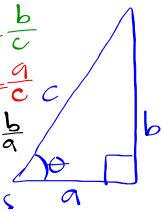
30°-60°-90°
$x \quad x\sqrt{3} \quad 2x$

Basic Trig

$\sin\theta = \frac{\text{opposit}}{\text{hypotenuse}} = \frac{b}{c}$

$\cos\theta = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{a}{c}$

$\tan\theta = \frac{\text{opposite}}{\text{adjacent}} = \frac{b}{a}$



$a^2+b^2=c^2$: Finds sides

To FIND an Angle:

Inverse Functions

$\sin^{-1}, \cos^{-1}, \tan^{-1}$

respectively

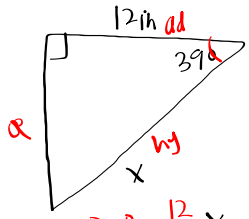
Reciprocals

NOT INVERSES

$\csc\theta = \frac{\text{hypotenuse}}{\text{opposite}} = \frac{c}{b}$

$\sec\theta = \frac{\text{hypotenuse}}{\text{adjacent}} = \frac{c}{a}$

$\cot\theta = \frac{\text{adjacent}}{\text{opposite}} = \frac{a}{b}$



$x\cos 39^\circ = \frac{12}{x} \cdot x$

$x\cos 39 = 12$

$x = \frac{12}{\cos 39}$

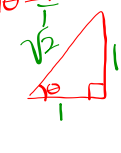
$x = 15.4$

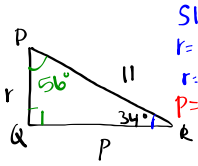
$15\tan 64 = \frac{x}{15} \cdot 15$

$15\tan 64 = x$

$x = 30.75$

12. $\tan\theta = \frac{1}{1}$





$\sin 34 = \frac{r}{11}$

$r = 11\sin 34$

$r = 6.15$

$p = 11\cos 34$

$p = 9.12$

$p = 9.12$ $\quad \angle P = 56^\circ$

$q = 11$ $\quad \angle Q = 90^\circ$

$r = 6.15$ $\quad \angle R = 34^\circ$