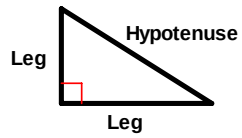
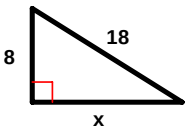
Geometry SOL Practice
Topic #10: Right Triangles
Notes

I. Pythagorean Theorem

Generalization	Example
 $Leg^2 + Leg^2 = Hyp^2$	 $8^2 + x^2 = 18^2$ $64 + x^2 = 324$ $x^2 = 260$ $x = \sqrt{260}$ $x \approx 16.12$

II. Trigonometry

Find x:

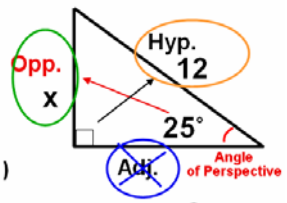
Step 1: Mark the "Angle of Perspective".

Step 2: Label the sides. (opp. / adj. / hyp.)

Step 3: Select a Trig. Ratio. (sin / cos / tan)

Step 4: Put the #s and the x into the equation.

Step 5: Solve.



$\sin 25^\circ = \frac{Opp.}{Hyp.}$

$\sin 25^\circ = \frac{x}{12}$

$x = 5.07$

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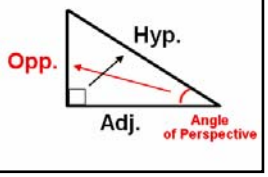
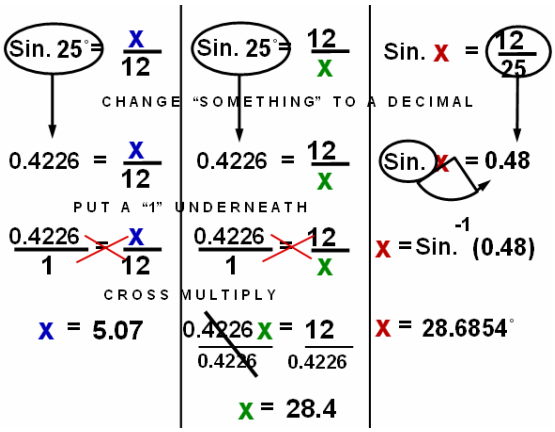
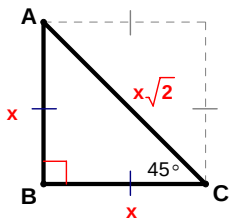
$\sin \angle = \frac{Opp.}{Hyp.}$ $\quad \cos \angle = \frac{Adj.}{Hyp.}$ $\quad \tan \angle = \frac{Opp.}{Adj.}$





III. Special Right Triangles (optional short cut)

45° - 45° - 90°



30° - 60° - 90°