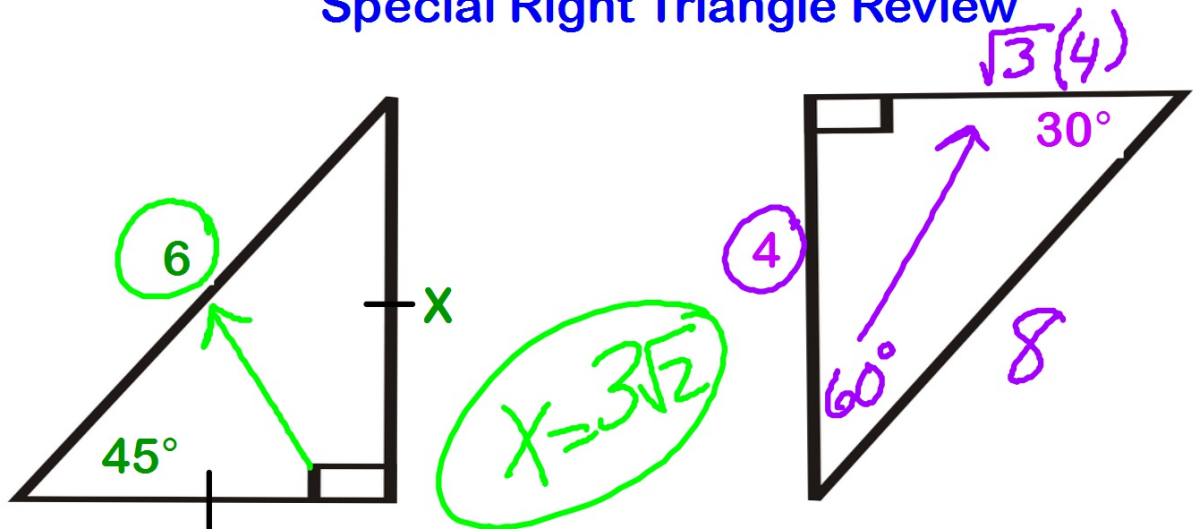


Special Right Triangle Review

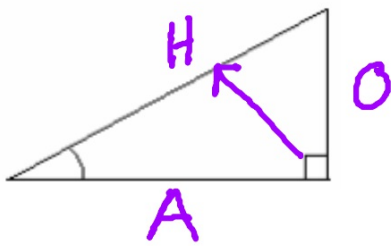


$$x = 3\sqrt{2}$$

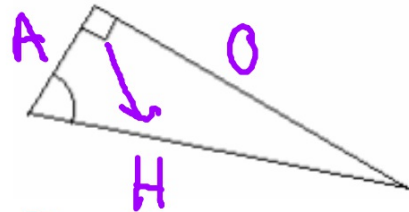
$$\frac{6}{\sqrt{2}} = \frac{\sqrt{2} x}{\sqrt{2}}$$
$$\frac{6}{\sqrt{2}} \frac{\sqrt{2}}{\sqrt{2}} = \frac{6\sqrt{2}}{2}$$

Label the Opposite, Adjacent and Hypotenuse

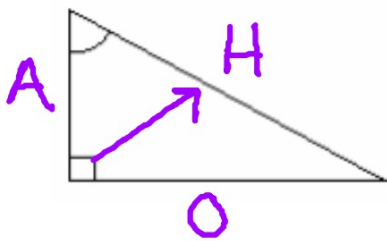
1.



2.



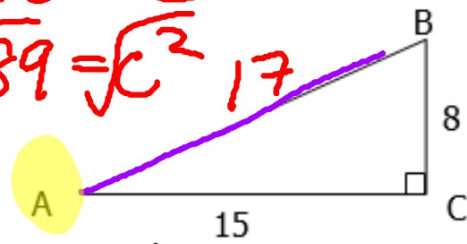
3.



$$8^2 + 15^2 = c^2$$

$$\sqrt{289} = \sqrt{c^2} \quad 17$$

11.



$$\sin B = \frac{15}{17}$$

$$\cos B = \frac{8}{17}$$

$$\tan B = \frac{15}{8}$$

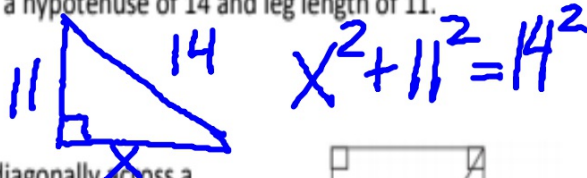
$$\sin A = \frac{8}{17}$$

$$\cos A = \frac{15}{17}$$

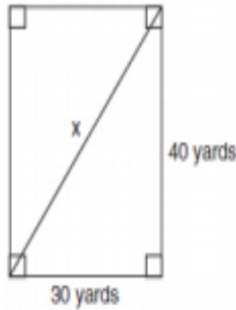
$$\tan A = \frac{8}{15}$$

Model Problems

- (a) Determine the missing side of a right triangle, to the nearest integer with a hypotenuse of 14 and leg length of 11.



- (b) Tanya runs diagonally across a rectangular field that has a length of 40 yards and a width of 30 yards, as shown in the diagram below. Find x .



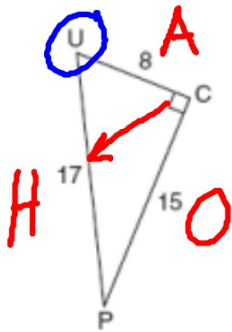
$40^2 + 30^2 = x^2$

Pythagorean
Theorem

$a^2 + b^2 = c^2$

Model Problems

Determine the following ratios.



(a) $\sin U = \frac{15}{17}$

(b) $\cos U = \frac{8}{17}$

(c) $\tan U = \frac{15}{8}$

Trig Ratios

$$\sin A = \frac{\text{opposite}}{\text{hypotenuse}} \quad \cos A = \frac{\text{adjacent}}{\text{hypotenuse}}$$

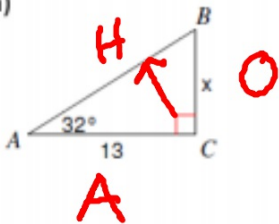
$$\tan A = \frac{\text{opposite}}{\text{adjacent}}$$

SOH CAH TOA

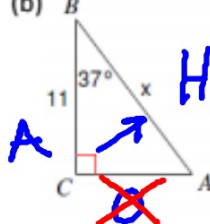
Model Problems

Find the missing side each right triangle, to the nearest integer.

(a)



(b)



Finding a Side
using Trig

~~SOH~~ ~~CAH~~ TOA

~~$\tan 32^\circ = \frac{x}{13}$~~

$x = 13 \tan 32$

$x = 8.12$

~~SOH~~ ~~CAH~~ ~~TOA~~

~~$\cos 37 = \frac{11}{x}$~~

$\frac{x \cdot \cos 37}{\cos 37} = \frac{11}{\cos 37}$

$x = 13.77$