

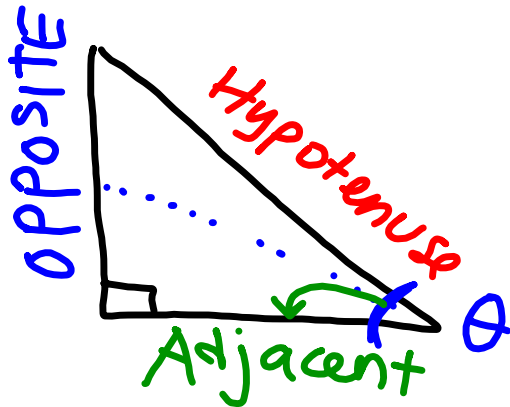
9-2 Trigonometric Ratios

Objective: I can find trigonometric ratios of a right triangle. (sin, cos, tan)

Objective: I can use trigonometric ratios to solve problems.

How to find trig in **RIGHT** triangles:

SOH CAH TOA



sine

$$\sin \theta = \frac{\text{opp.}}{\text{hyp}}$$

cosine

$$\cos \theta = \frac{\text{adj.}}{\text{hyp}}$$

tangent

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

"theta" Greek symbol that we use for angles

Find:

$$\sin A = \frac{a}{c}$$

"Soh"

$$\cos A = \frac{b}{c}$$

"Cah"

$$\tan A = \frac{a}{b}$$

"Toa"

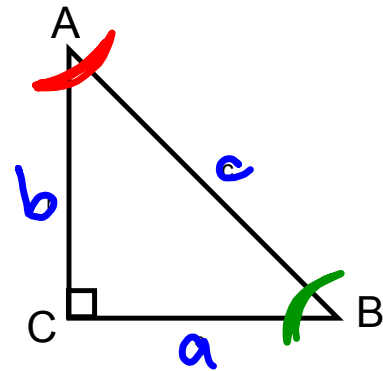
$$\frac{a}{c} \quad \frac{b}{c} \quad \frac{a}{b}$$

$$\sin B = \frac{b}{c}$$

$$\cos B = \frac{a}{c}$$

$$\tan B = \frac{b}{a}$$

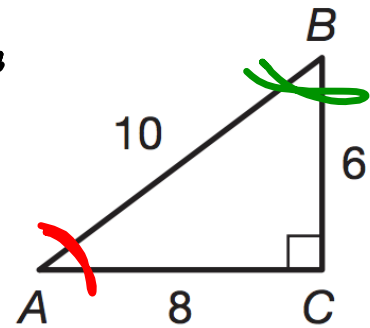
$$\frac{b}{c} \quad \frac{a}{c} \quad \frac{b}{a}$$



Find:

$$\begin{aligned} \sin A &= \frac{6}{10} = \frac{3}{5} \\ \cos A &= \frac{8}{10} = \frac{4}{5} \\ \tan A &= \frac{6}{8} = \frac{3}{4} \end{aligned}$$

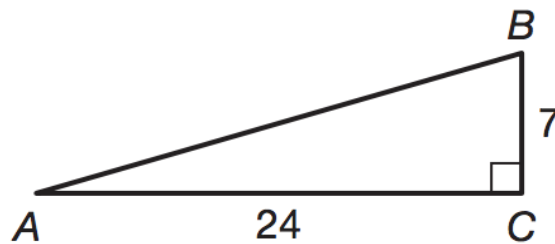
$$\begin{aligned} \sin B &= \frac{8}{10} = \frac{4}{5} \\ \cos B &= \frac{6}{10} = \frac{3}{5} \\ \tan B &= \frac{8}{6} = \frac{4}{3} \end{aligned}$$



Find: $\sin A =$

$\cos A =$

$\tan A =$



Find the other trigonometric ratios:

(hint: draw a triangle)

$$\sin \theta = \frac{3}{5}$$

Find the other trigonometric ratios:

(hint: draw a triangle)

$$\cos \theta = \frac{12}{13}$$