

TRIG RATIOS

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

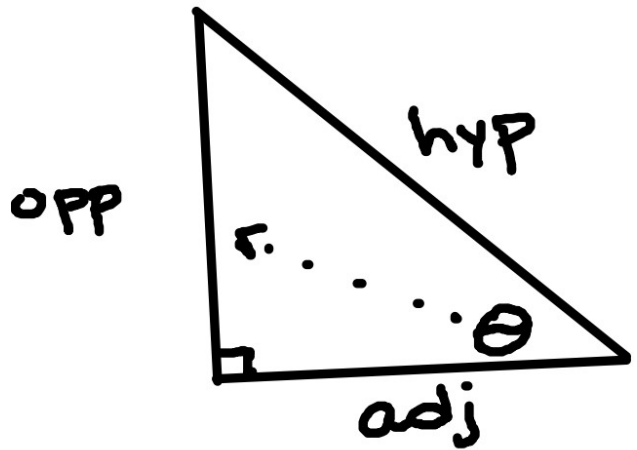
$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

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

$$\secant \theta = \sec \theta$$

(Reciprocal of cosine θ)

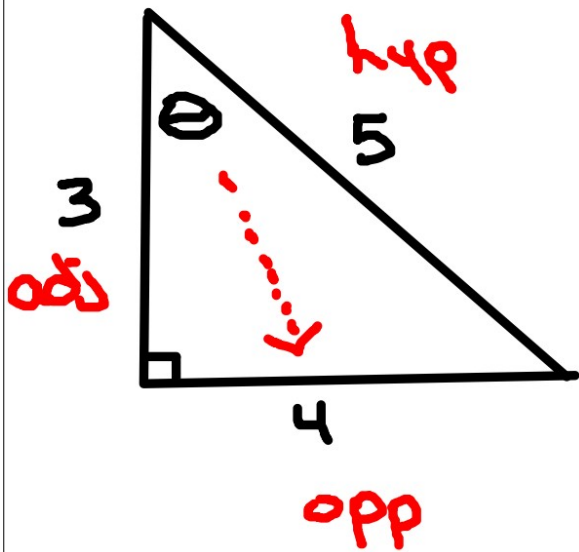
$$\sec \theta = \frac{\text{hyp}}{\text{adj}}$$



$$\operatorname{cosecant} \theta = \csc \theta$$

(Reciprocal of sine θ)

$$\csc \theta = \frac{\text{hyp}}{\text{opp}}$$



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

$$\cos \theta = \frac{4}{5}$$

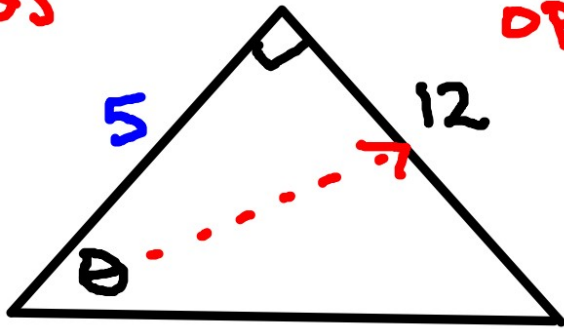
$$\tan \theta = \frac{3}{4}$$

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

$$\sec \theta = \frac{5}{4}$$

$$\cot \theta = \frac{4}{3}$$

adj



hyp

Pythagorean Thm

$$a^2 + b^2 = c^2 \text{ (hyp)}$$

$$* a^2 + 12^2 = 13^2$$

$$a^2 + 144 = 169$$

$$\sqrt{a^2} = \sqrt{25} \quad a = 5$$

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

$$\cos \theta = \frac{5}{13}$$

$$\tan \theta = \frac{12}{5}$$

$$\sec \theta = \frac{13}{5}$$

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

$$\cot \theta = \frac{5}{12}$$