

$$a^2 + 8^2 = 17^2$$

DRILL

SOH CAH TOA

Find $\sin A = \frac{15}{17}$

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

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

①

$$a^2 + 8^2 = 17^2$$

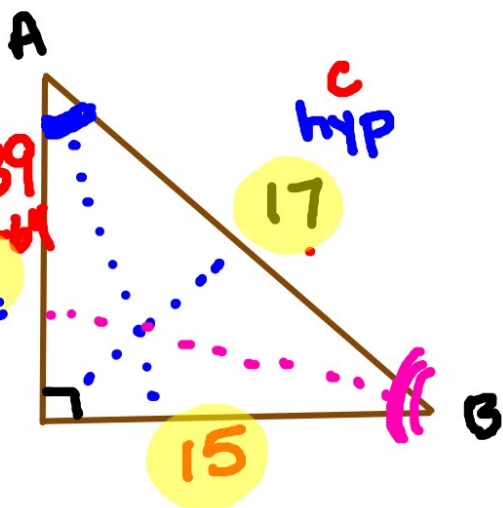
$$a^2 = 289 - 64$$

$$a^2 = 225$$

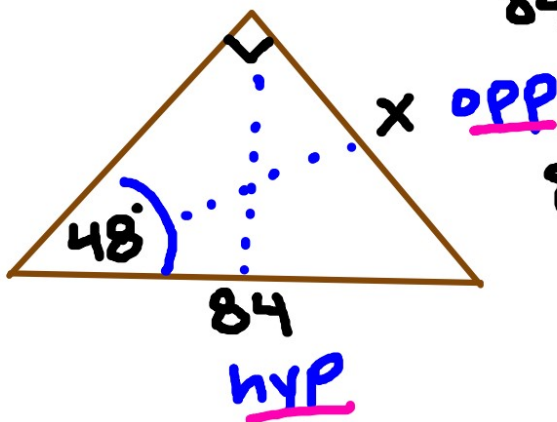
$$a = 15$$

$$a = \sqrt{225}$$

$$a = 15$$



② Solve for x:

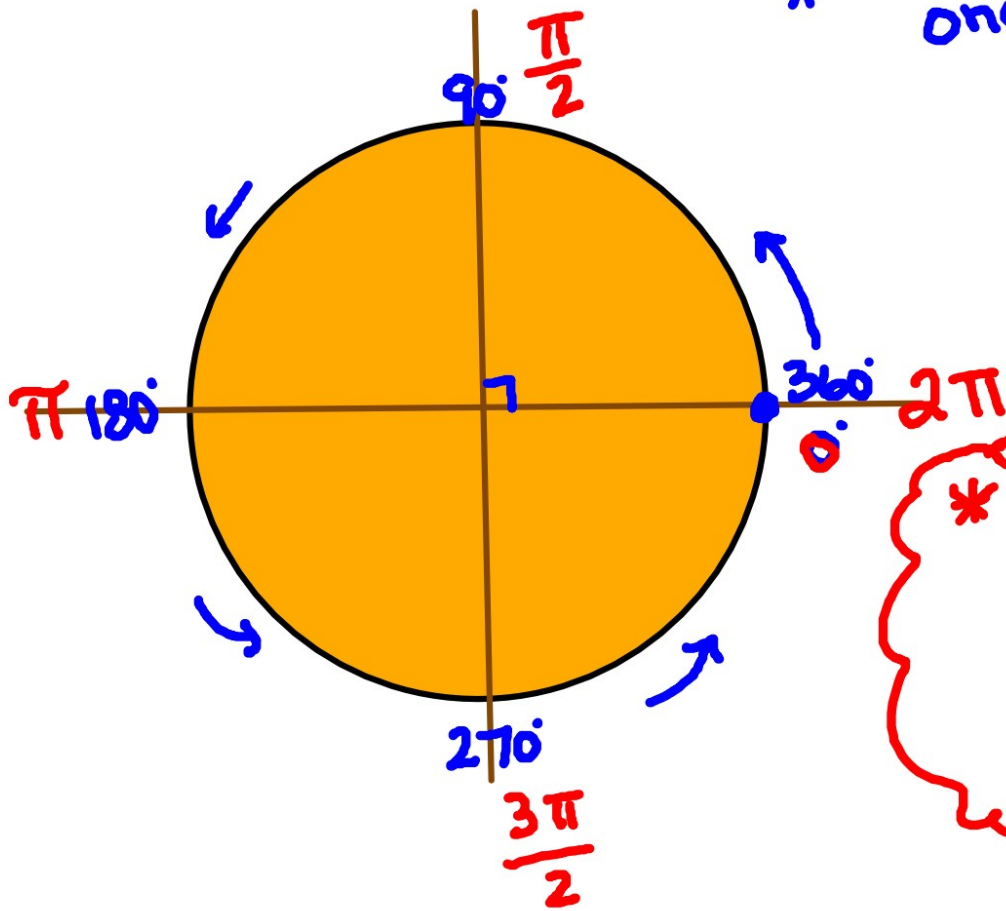


$$84 \sin 48 = \frac{x}{84} \cdot 84$$

$$84 \sin 48 = x$$

$$62.42 \approx x$$

Radians



* 360° is one full circle

* 2π radians is one full circle

Degrees to Radians

π (pi)

- Multiply by π
- Divide by 180°
- Simplify the fraction

Ex: $200^\circ \rightarrow 200\pi \rightarrow \frac{200\pi}{180} \rightarrow \frac{10\pi}{9}$

Ex: $145^\circ \rightarrow 145\pi \rightarrow \frac{145\pi}{180} \rightarrow \frac{29\pi}{36}$

Ex: $285^\circ \rightarrow 285\pi \rightarrow \frac{285\pi}{180} \rightarrow \frac{19\pi}{12}$

Radians to Degrees

- Divide by π
- Multiply by 180°

Ex: $\frac{4\pi}{5} \rightarrow \frac{4\cancel{\pi}}{5\cancel{\pi}} \rightarrow \frac{4}{5}(180^\circ) \rightarrow \underline{\underline{144^\circ}}$

Ex: $\frac{8\pi}{11} \rightarrow \frac{8\cancel{\pi}}{11\cancel{\pi}} \rightarrow \frac{8}{11}(180^\circ) \rightarrow \underline{\underline{130.9^\circ}}$