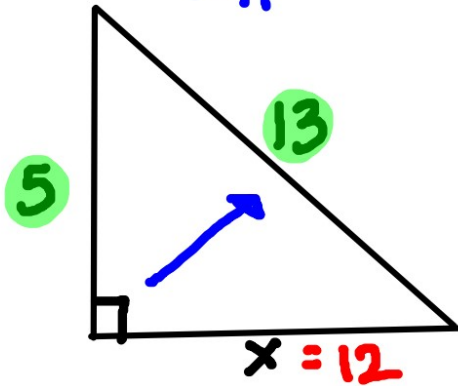


$$a^2 + b^2 = c^2$$

hyp

DRILL SOH CAH TOA

①



Solve for x:

$$x^2 + 5^2 = 13^2$$

$$x^2 + 25 = 169$$

$$-25 \quad -25$$

$$\sqrt{x^2} = \sqrt{144}$$

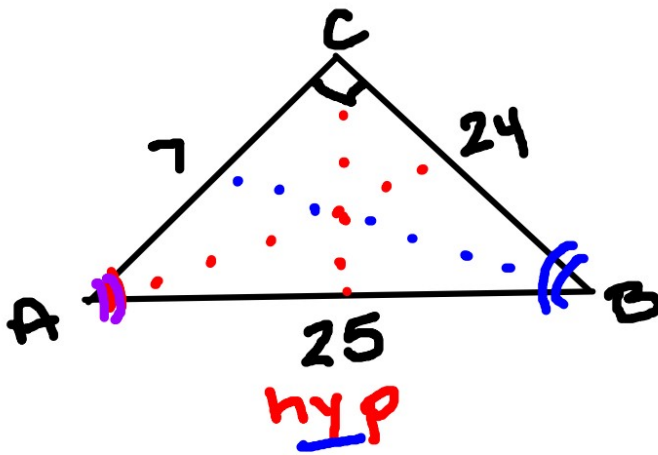
$$x = 12$$

Find sin A = $\frac{24}{25}$

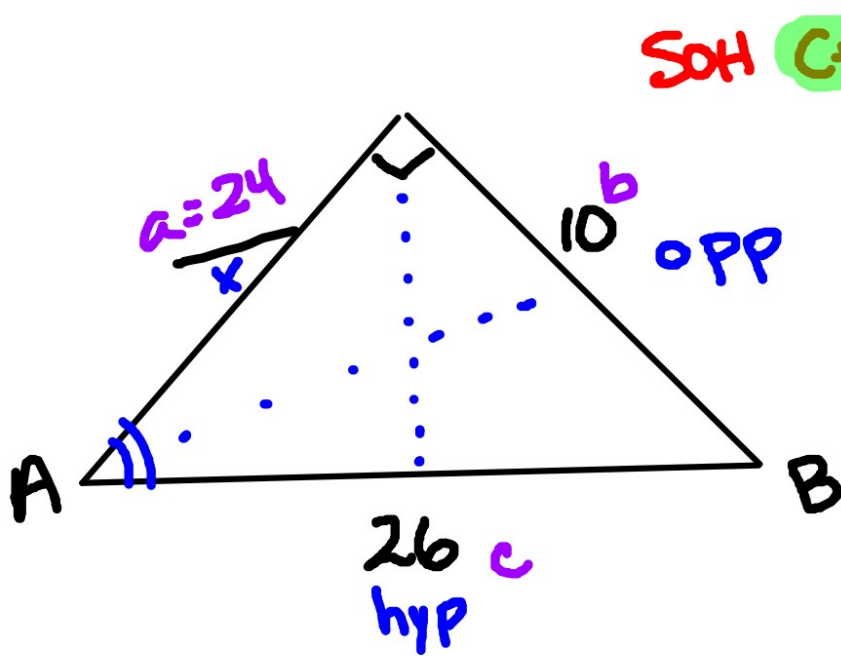
tan B = $\frac{7}{24}$

cos A = $\frac{7}{25}$

②



Ex:



SOH CAH TOA

$$a^2 + b^2 = c^2$$
$$x^2 + 10^2 = 26^2$$
$$x^2 + 100 = 676$$
$$-100 \quad -100$$

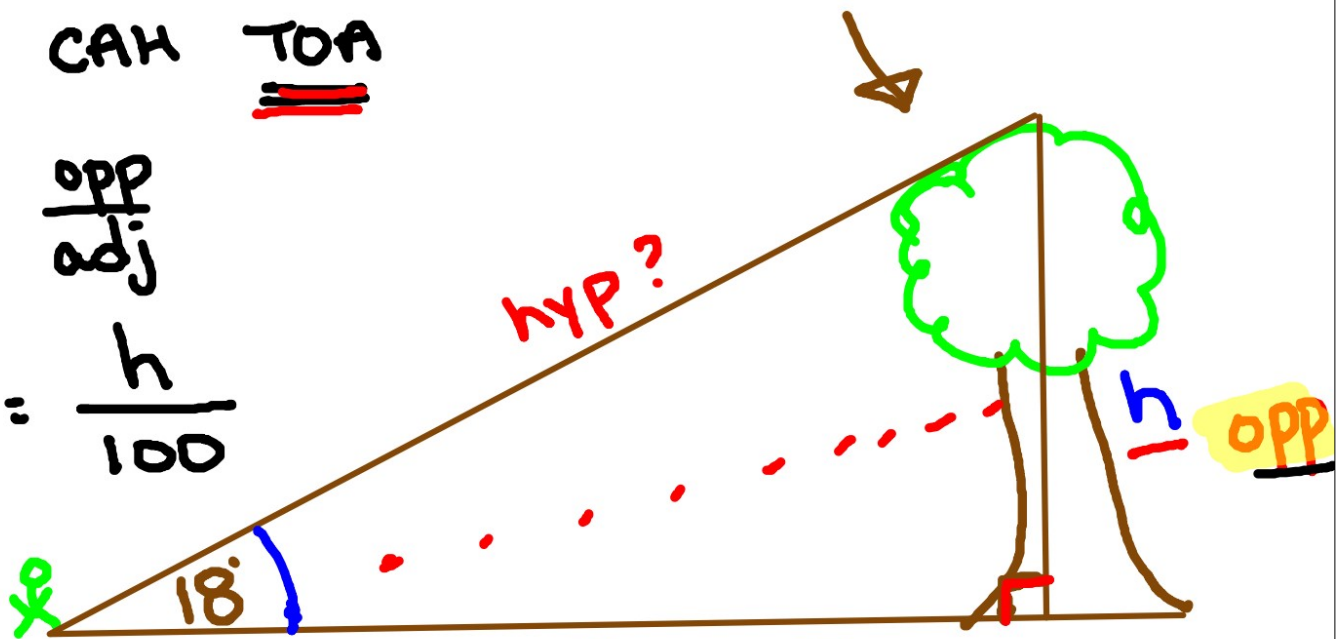
$$\sqrt{x^2} = \sqrt{576}$$
$$x = 24$$

Find $\cos A = \frac{\text{adj}}{\text{hyp}} = \frac{24}{26} = \frac{12}{13}$

SOH CAH TOA

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

$$\tan 18^\circ = \frac{h}{100}$$



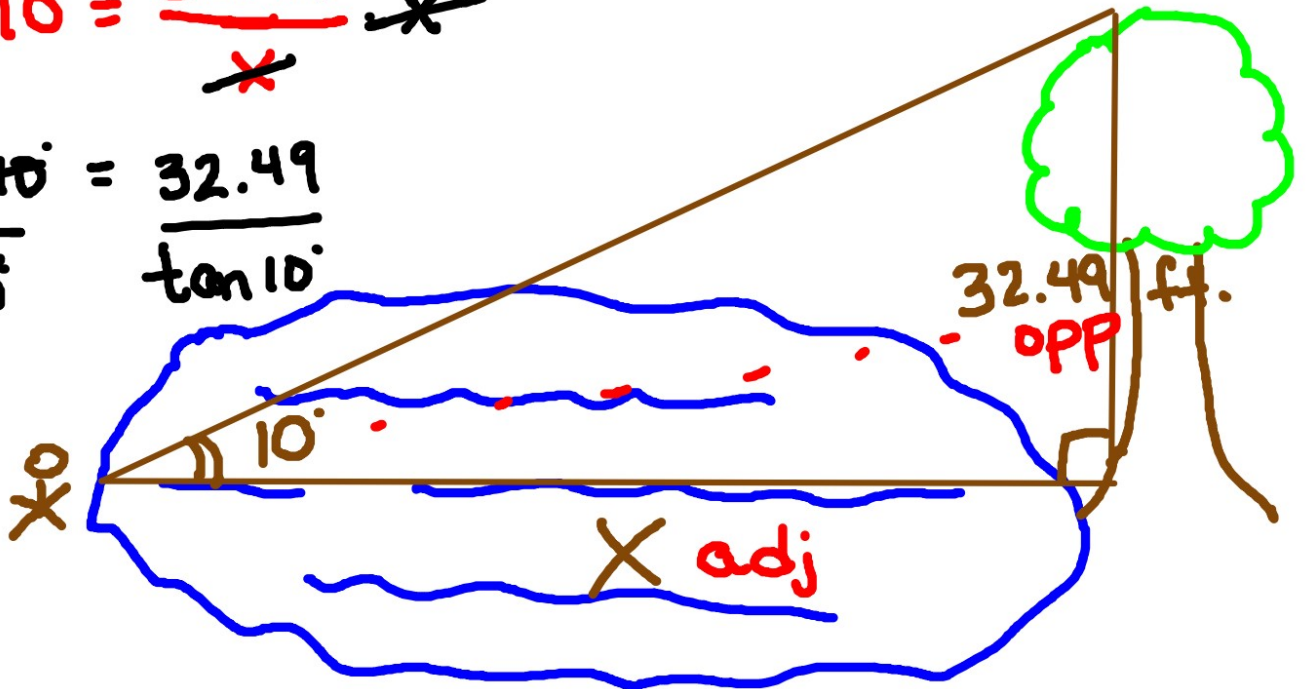
$$100 \cdot \tan 18^\circ = \frac{h}{100} \cdot 100$$

$$32.49 \approx h$$

Tree is 32.49 feet tall

$$x \cdot \tan 10^\circ = \frac{32.49}{x} \rightarrow x$$

$$\frac{x \cdot \tan 10^\circ}{\tan 10^\circ} = \frac{32.49}{\tan 10^\circ}$$



$x \approx 184.26$  Lake is 184.26 feet wide