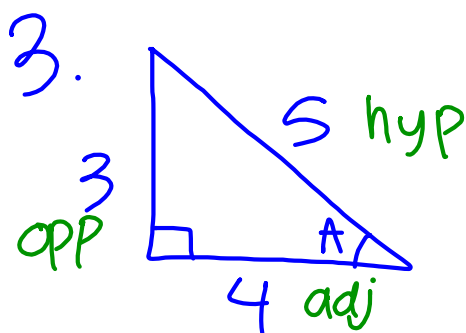
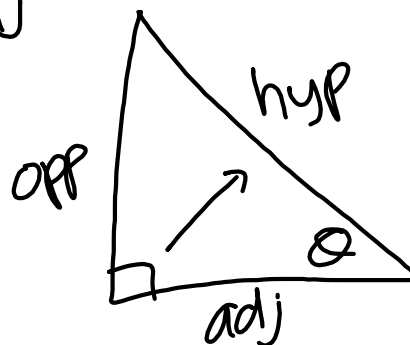


1. SOH $\sin \theta = \frac{\text{opp}}{\text{hyp}}$ } side lengths "theta" angle

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

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

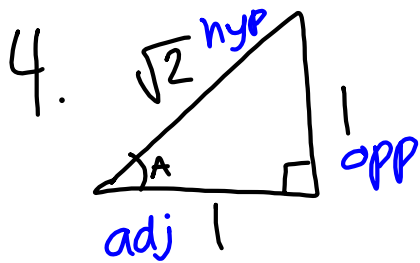


$$\sin A = \frac{\text{opp}}{\text{hyp}} = \frac{3}{5}$$

$$\cos A = \frac{\text{adj}}{\text{hyp}} = \frac{4}{5}$$

$$\tan A = \frac{\text{opp}}{\text{adj}} = \frac{3}{4}$$

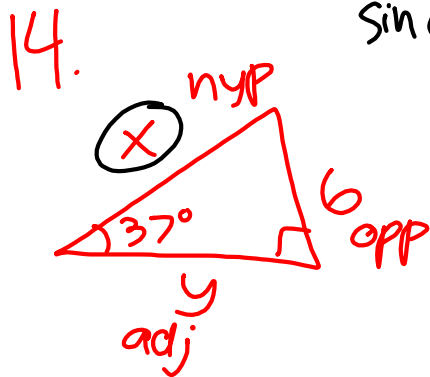
SOH
CAH
TOA



$$\sin A = \frac{\text{opp}}{\text{hyp}} = \boxed{\frac{1}{\sqrt{2}}}$$

$$\cos A = \frac{\text{adj}}{\text{hyp}} = \boxed{\frac{1}{\sqrt{2}}}$$

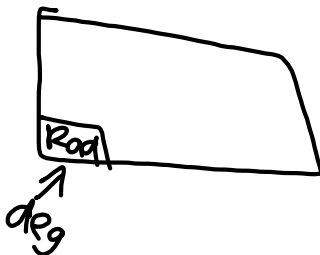
$$\tan A = \frac{\text{opp}}{\text{adj}} = \frac{1}{1} = \boxed{1}$$



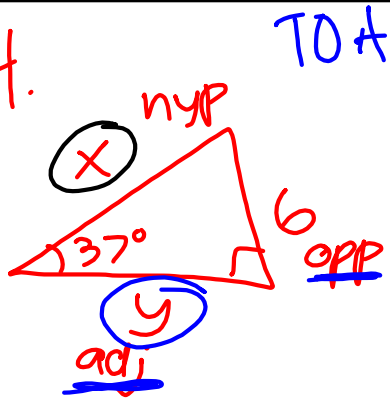
$$\sin \frac{\text{opp}}{\text{hyp}} \quad X \cdot \sin 37^\circ = \frac{6}{X} \quad X$$

$$\frac{X \cdot \sin 37^\circ}{\sin 37^\circ} = \frac{6}{\sin 37^\circ}$$

$$X = \frac{6}{\sin 37^\circ} \approx \boxed{9.97}$$



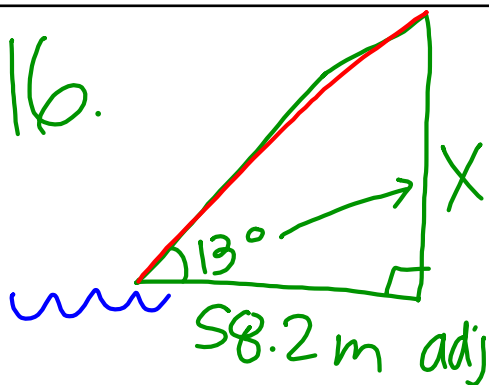
14.



$$y \cdot \tan 37^\circ = \frac{6}{y} \cdot y$$

$$\frac{y \cdot \tan 37^\circ}{\cancel{\tan 37^\circ}} = \frac{6}{\cancel{\tan 37^\circ}}$$

16.



$$58.2 \cdot \tan 13^\circ = \frac{X \cdot 58.2}{58.2}$$

$$58.2 \cdot \tan 13^\circ = X$$

$$\boxed{13.44 \text{ m}}$$