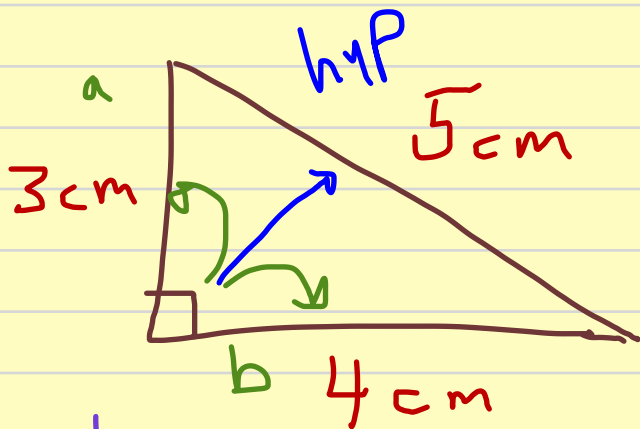


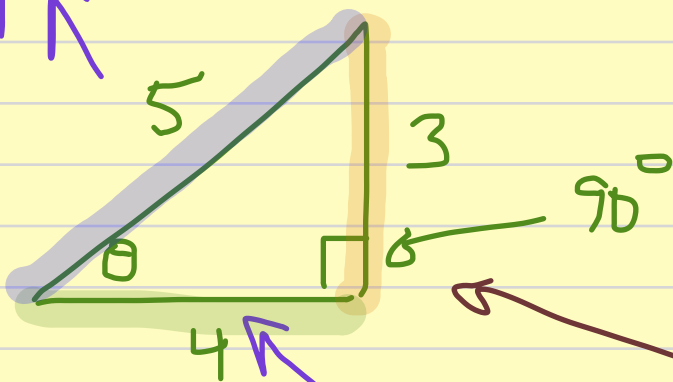
# Trigonometry

Triangle      measure



Works only with right angle  $\Delta$ , like this one...

hypotenuse



$\theta$  = theta - used when you don't know an angle

The side opposite  $\theta$  is 3

The side adjacent  $\theta$  is 4

3 ratios we deal with

1. Sine ratio

2. Cosine ratio

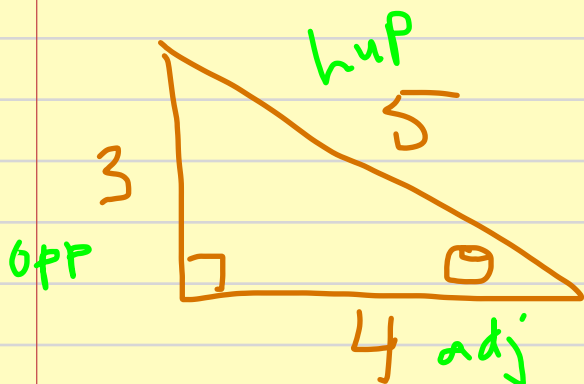
3. Tangent ratio

soh cah toa

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

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

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

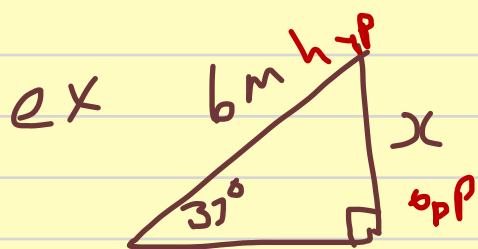


$$\sin \theta = \frac{3}{5}$$

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

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

If I know an angle and a side,  
I can find the other sides.



$$\sin 37^\circ = \frac{\text{opp}}{\text{hyp}}$$

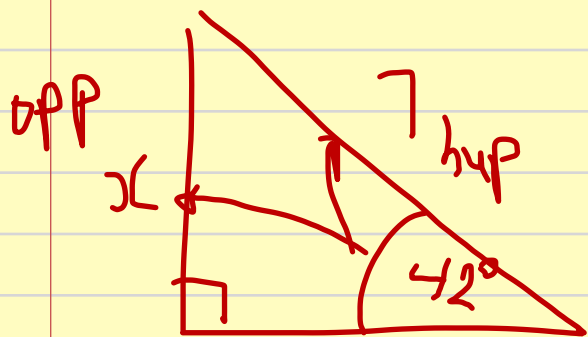
$$\sin 37^\circ = \frac{x}{6m}$$

$$0.6018 = \frac{x}{6m} \times 6$$

$$x = (0.6018)(6) = 3.61m$$

# Sohcahtoa

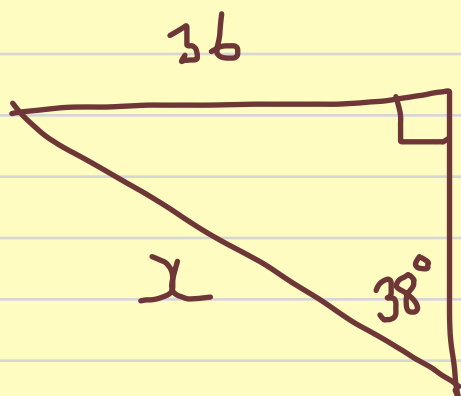
Find  $x$



$$\sin 42^\circ = \frac{\text{opp}}{\text{hyp}}$$

$$7 \times \sin 42^\circ = \frac{x}{7}$$

$$x = 4.68$$



Find  $x$

