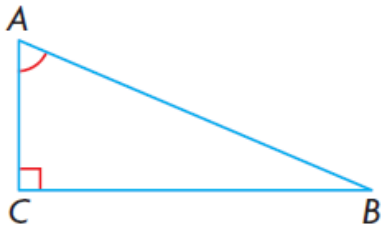
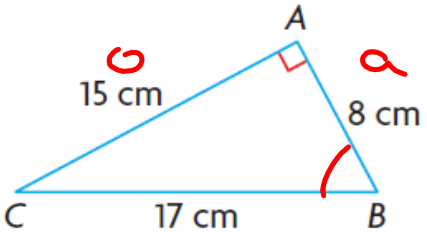
Primary Trig Ratios Quiz

1. a) Which side is opposite to $\angle A$? CB, a
   b) Which side is adjacent to $\angle A$? AC, b
   c) Which side is the hypotenuse? AB



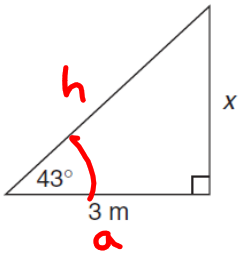
2. Determine each ratio
   a) sin C = $\frac{17}{17}$
   b) cos C = $\frac{15}{17}$
   c) tan B = $\frac{15}{8}$



O a h

3. Determine the length of x.

a)

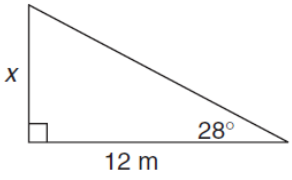


a o

$\tan(43) = \frac{x}{3}$

a

b)

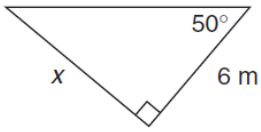


C-B

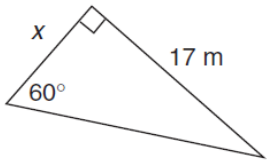
$0.97 = \frac{x}{3}$

$2.91 = x$

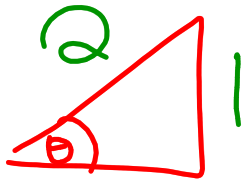
c)



d)



$\sin(\theta) = \frac{1}{2}$



$(x-3)^2$

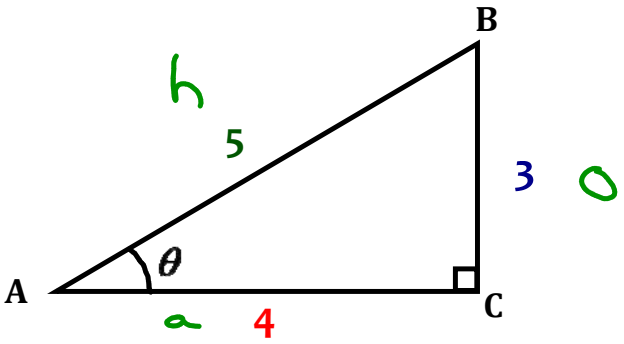
x^2+9

$\sin\theta = \frac{o}{h}$

Sin

Cos

Primary Trig Ratios - Finding an Angle



Find angle **theta.**

$$\sin\theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos\theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan\theta = \frac{\text{opposite}}{\text{adjacent}}$$

$\sin\theta = \frac{O}{h}$

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

$\theta = \sin^{-1}\left(\frac{3}{5}\right)$

$\theta = 36.87$

$\cos\theta = \frac{a}{h}$

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

$\theta = \cos^{-1}\left(\frac{4}{5}\right)$

$\theta = 36.87$

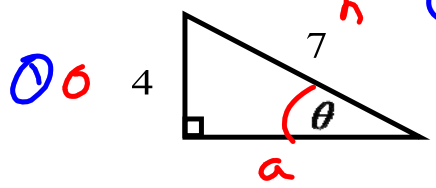
$\tan\theta = \frac{O}{a}$

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

$\theta = \tan^{-1}\left(\frac{3}{4}\right)$

$\theta = 36.87$

Ex 4. Solve for the unknown variable



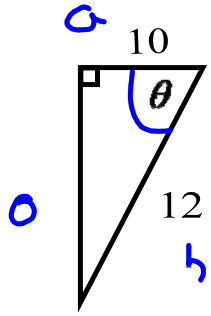
① o ② o h ∴ use sin

$\sin\theta = \frac{o}{h}$

$\sin\theta = \frac{4}{7}$

$\theta = \sin^{-1}\left(\frac{4}{7}\right)$

$\theta = 34.75$



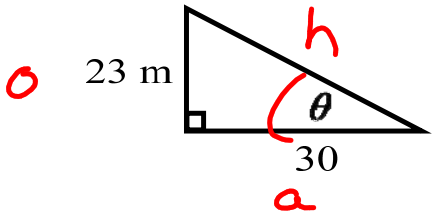
a h

$\cos\theta = \frac{a}{h}$

$\cos\theta = \frac{10}{12}$

$\theta = \cos^{-1}\left(\frac{10}{12}\right)$

$\theta = 33.56$



o a ∴ tan

$\tan\theta = \frac{o}{a}$

$\tan\theta = \frac{23}{30}$

$\theta = \tan^{-1}\left(\frac{23}{30}\right)$

$\theta = 37.48$

Ex. 3

From the bridge of The Maid of the Mist on the Niagara River, the angle of elevation to the top of Niagara Falls is 64°. The angle of depression to the bottom of the falls is 6°. If the bridge of the boat is 2.8 m above the water, calculate the height of the falls, correct to one decimal place.