SOHCAHTOA

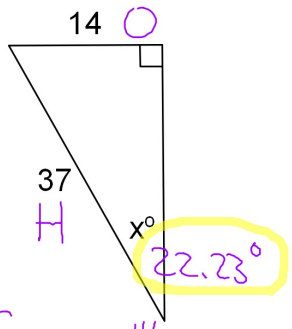
$$\text{Sin}A = \frac{\text{leg opposite } \angle A}{\text{hypotenuse}}$$

$$\text{Cos}A = \frac{\text{leg adjacent to } \angle A}{\text{hypotenuse}}$$

$$\text{Tan}A = \frac{\text{Leg Opposite } \angle A}{\text{Leg Adjacent to } \angle A}$$

Find the value of x to the nearest hundredth.

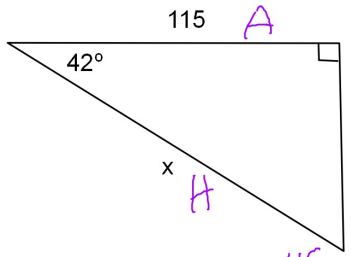
1.



22.23°

$\text{Sin } x = \frac{14}{37}$

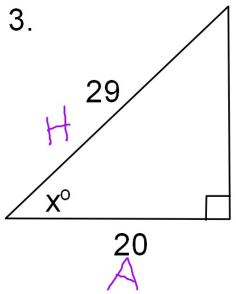
2.



$\frac{\text{Cos } 42}{1} = \frac{115}{X}$

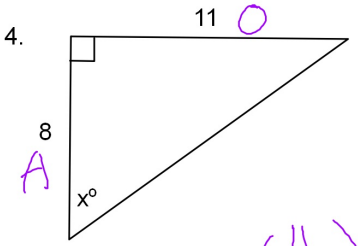
$X = 154.75$

3.



$\text{Cos}^{-1}\left(\frac{20}{29}\right) = 46.40°$

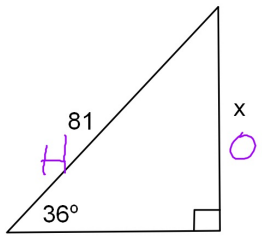
4.



$\text{Tan}^{-1}\left(\frac{11}{8}\right)$

53.97°

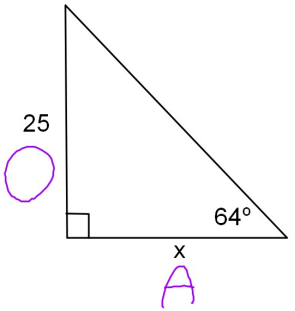
5.



$\text{Sin}36 = \frac{X}{81}$

47.61

6.



$\frac{\text{Tan}64°}{1} = \frac{25}{X}$

12.19

7. A 12 foot long ladder is placed up against a wall. The bottom of the ladder makes a 65° angle with the ground. How far from the wall is the bottom of the ladder?

x= 2.07 ft

$\cos 65 = \frac{x}{12}$

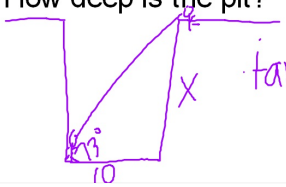
8. You fly a kite on a 200 foot long string. When the string is taut it makes a 52° angle with the ground. How high is the kite?

$\sin 52 = \frac{h}{200}$

x = 157.60 ft

9. You are at the bottom of an pit. The pit is 10 feet wide. If you stand against the wall on one side and look up at a 73° angle at the other side you see your friend. How deep is the pit?

x =32.71 ft



$\tan 73 = \frac{x}{10}$