

5-14-15

Inverse Trig Functions

Inverse trig functions are used to find the measure of angles given the value of a trig function.

SOH-CAH-TOA

May 13-9:17 PM

Example 1: Find the angle with the given sine value.

$$\sin x = \frac{1}{2}$$

(We want to know which angle has a sine value of $\frac{1}{2}$.)

$$\sin^{-1} \frac{1}{2} = x$$

Example 2: Find the angle with the given cosine value.

$$\cos x = 0.694658$$

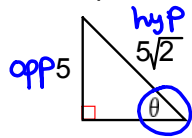
Example 3: Find the angle with the given tangent value.

$$\tan x = -1.03553$$

May 13-9:43 PM

Find the angle, given these sides.

Example 4:



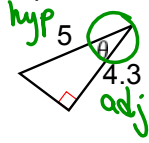
SOH-CAH-TOA

θ Theta angle

$$\sin \theta = \frac{5}{5\sqrt{2}}$$

$$\theta = \sin^{-1}\left(\frac{5}{5\sqrt{2}}\right) = 45^\circ$$

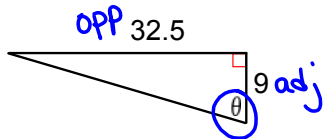
Example 5:



$$\cos \theta = \frac{4.3}{5}$$

$$\theta = \cos^{-1}\left(\frac{4.3}{5}\right) = 31^\circ$$

Example 6:



$$\tan \theta = \frac{32.5}{9}$$

$$\theta = \tan^{-1}\left(\frac{32.5}{9}\right)$$

$$\theta = 75^\circ$$

May 13-9:54 PM

Conclusion

1. What do you press on the calculator to get the inverse? 2^{nd} SOH-CAH-TOA

2. What does the inverse give you?

3. Questions??? Angle

May 11-8:40 AM

Assignment:
Find the Missing Angle

May 13-10:03 PM