

$$\begin{aligned}\cos(\theta) &= \sin(90-\theta) \\ \sin(\theta) &= \cos(90-\theta)\end{aligned}$$

Property of Complementary Angles in Right Triangles

1. In $\triangle MNO$, where O is a right angle, what trig. function is congruent to $\cos(M)$?

$$\cos(M) = \sin(N)$$

2. In $\triangle QRS$, where R is the right angle, what trig. function is congruent to $\sin(Q)$?

$$\sin(Q) = \cos(S)$$

3. The $\cos(A) = \frac{3}{5}$ in $\triangle ABC$. What is the $\sin(B)$ if $\angle C$ is the right angle?

$$\sin(B) = \frac{3}{5}$$

4. The $\cos(38^\circ)$ is equal to what other trigonometric function?

$$\cos(38^\circ) = \sin(52^\circ)$$

5. In $\triangle HIJ$, the $\sin(J) = \frac{\sqrt{3}}{2}$. What is the $\cos(H)$ if $m\angle I = 90^\circ$?

$$\cos(H) = \frac{\sqrt{3}}{2}$$

6. What trigonometric function is equal to $\sin(56^\circ)$?

$$\sin(56^\circ) = \cos(34^\circ)$$

7. What trigonometric function is equal to $\cos(82^\circ)$?

$$\cos(82^\circ) = \sin(8^\circ)$$

8. The $\sin(\theta)$ is equal to what trigonometric function?

$$\sin(\theta) = \cos(90-\theta)$$

9. If the $\cos(60^\circ) = \frac{1}{2}$ what does the $\sin(30^\circ)$ equal?

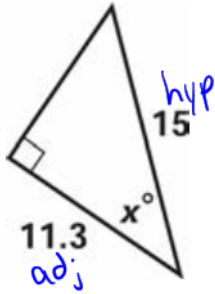
$$\sin(30^\circ) = \frac{1}{2}$$

10. If the $\sin(45^\circ) = \frac{\sqrt{2}}{2}$, what does the $\cos(45^\circ)$ equal?

$$\cos(45^\circ) = \frac{\sqrt{2}}{2}$$

Find measure of the indicated angle. Round to the 3rd decimal place.

1.

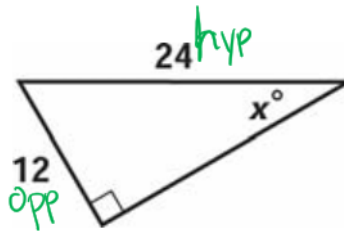


$x =$ _____

$$\cos(x) = \frac{11.3}{15}$$

$$x = \cos^{-1}\left(\frac{11.3}{15}\right)$$

2.

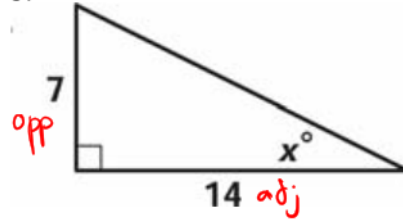


$x =$ 30°

$$\sin(x) = \frac{12}{24}$$

$$x = \sin^{-1}\left(\frac{12}{24}\right) = 30^\circ$$

3.

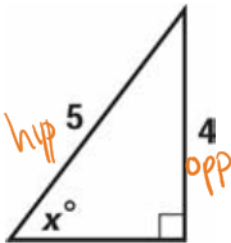


$x =$ _____

$$\tan(x) = \frac{7}{14}$$

$$x = \tan^{-1}\left(\frac{7}{14}\right)$$

4.

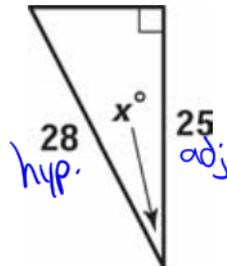


$x =$ _____

$$\sin(x) = \frac{4}{5}$$

$$x = \sin^{-1}\left(\frac{4}{5}\right)$$

5.

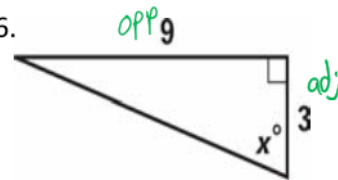


$x =$ _____

$$\cos(x) = \frac{25}{28}$$

$$x = \cos^{-1}\left(\frac{25}{28}\right)$$

6.

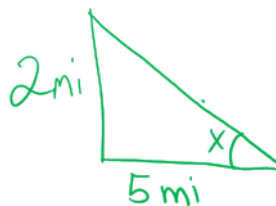


$x =$ _____

$$\tan(x) = \frac{9}{3}$$

$$x = \tan^{-1}\left(\frac{9}{3}\right)$$

7. An airplane is flying at a height of 2 miles above the ground. The distance along the ground from the airplane to the airport is 5 miles. What is the measure of the angle from the airport to the airplane?



$$\tan(x) = \frac{2}{5}$$

$$x = \tan^{-1}\left(\frac{2}{5}\right)$$

8. A tower is 125 ft tall and uses 200 ft long support wires attached to the ground. What is the angle from the ground that would be necessary to use these support wires?



$$\sin(x) = \frac{125}{200}$$

$$x = \sin^{-1}\left(\frac{125}{200}\right)$$