[12-01-23-T11]

Basic Trig Review

Find all numbers for which

[1] $\sin x = \frac{\sqrt{3}}{2}$

[2] $\sin x = \frac{-\sqrt{3}}{2}$

[3] $\cos x = \frac{-\sqrt{3}}{2}$

[4] $\cos x = \frac{-\sqrt{3}}{2}$

Find all numbers $x \in [0, 2\pi)$ for which

[5] $\sin x < \frac{1}{2}$

[6] $\sin x \geq \frac{-1}{2}$

[7] $\cos x < \frac{1}{2}$

[8] $\cos x \geq \frac{-1}{2}$

Answer the following

[9] If $\sin\theta = 0.9608$, what is $\sin -\theta$?

[10] If $\cos\theta = 0.9608$, what is $\cos -\theta$?

[11] If $\sin\theta = 0.9608$, what is $\sin(\pi - \theta)$?

[12] If $\sin\theta = 0.9608$, what is $\sin(\pi + \theta)$?

[13] If $\sin\theta = 0.7678$ for $\theta \in [\frac{\pi}{2}, \pi]$, what is $\cos\theta$?

[14] Find the value of the sine of $\frac{97\pi}{6}$.

[15] Find $\sin\frac{111\pi}{4}$.

[16] Prove that $\tan^2 x + 1 = \sec^2 x$.

[17] Prove that $\cot^2 x + 1 = \csc^2 x$.