Pre-Calculus Test Review
Trigonometric Functions Unit

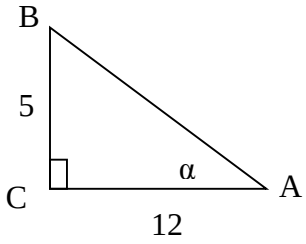
Name _____
Date: _____Period: _____

1. The point $(-1, \sqrt{3})$ is on the terminal side of an angle in standard position. Give the smallest positive angle measure in both degrees and radians.

2. **Evaluate without a calculator.**

A.) $\sec\left(-\frac{\pi}{3}\right)$ **B.)** $\sin\left(\frac{5\pi}{6}\right)$ **C.)** $cos\left(\frac{17\pi}{3}\right)$

3. Find all six trigonometric functions of α in ΔABC .



4. Solve the right triangle: $B = 72°$ $b = 24$ cm.

5. A 200 ft. guywire is attached to the top of a tower. If the wire makes a 55 degree angle with the ground, how tall is the tower?

6. The angle of depression from the top of one building to the foot of a building across the street is 53°. The angle of depression to the top of the same building is 19°. The two buildings are 80 feet apart. What is the height of the shorter building?

 Jean Adams

7. State the domain and range of one period of $y = -3\,cos\left(x + \frac{\pi}{2}\right) + 2$.

8. Write an equation for a cosine function which has an amplitude of 6, a period of π, and phase shift $\frac{\pi}{2}$ to the left.

9. The point $(-5, -3)$ is on the terminal side of angle θ. Evaluate the six trigonometric functions for θ.

10. Find the exact value of x without a calculator $\tan x = -1\,, 0 \leq x \leq \pi$

11. Describe the end behavior of $f(x) = \frac{\sin x}{x^2}$

12. Evaluate without a calculator.

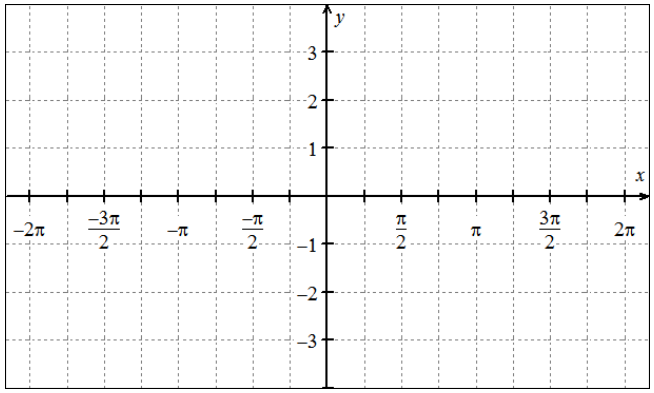
A.) $\cos^{-1}\left(\sin\frac{5\pi}{3}\right)$ **B.)** $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)$ **C.)** $\sin^{-1}(\tan(-2))$

 Jean Adams

Graph each equation carefully. Give the period and amplitude and asymptotes.

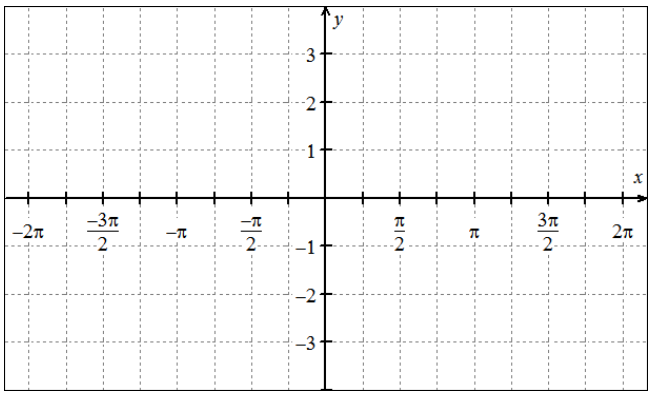
13. $y = \sin\left(x + \frac{\pi}{2}\right)$

Period_____ Amplitude_____



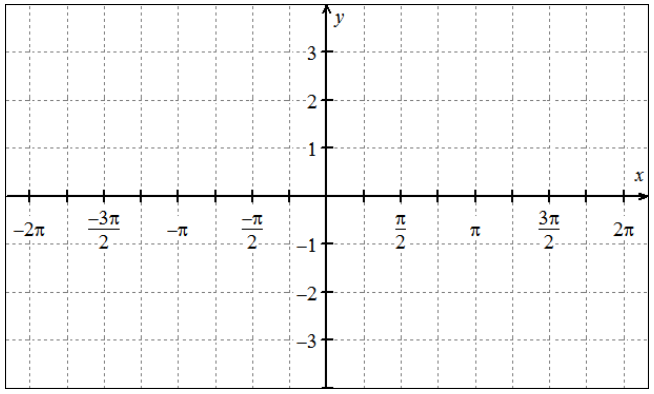
14. $y = -\frac{1}{2}\cos x$

Period _____ Amplitude _____



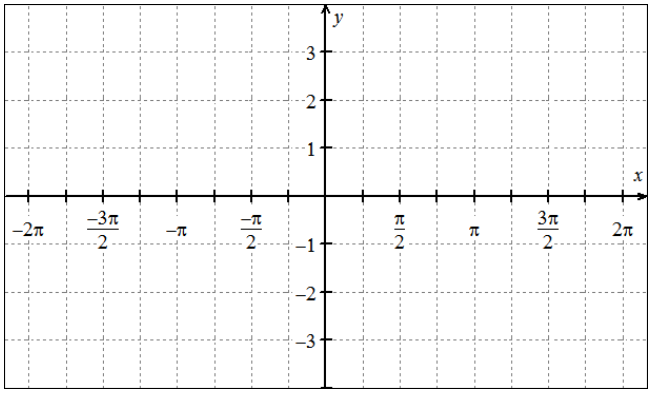
15. $y = \sin 2x + 1$

Period_____ Amplitude_____



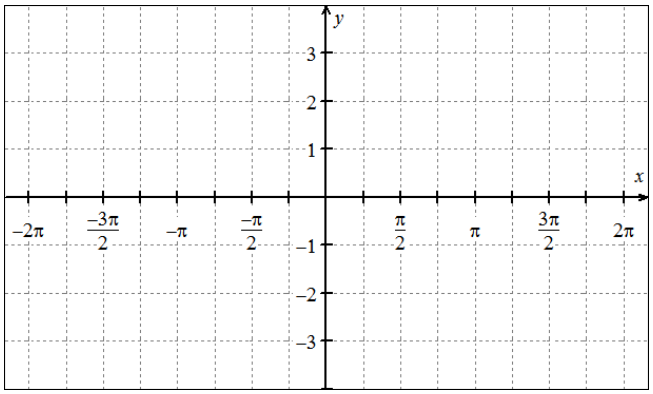
16. $y = csc\ x$

Period _____ Amplitude _____



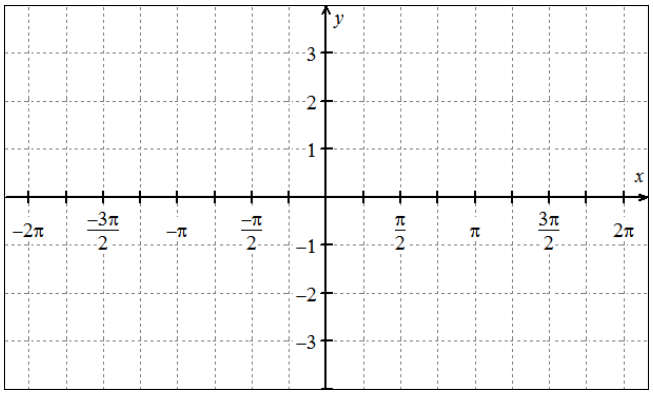
17. $y = -2\cos(x + \pi)$

Period_____ Amplitude_____



18. $y = -\sec(x - \pi)$

Period _____ Amplitude _____



 Jean Adams