

**Pre-Calculus
Mid-Chapter Review (plus some)**

Name:

Date:

Period:

1. Convert between degrees and radians or vice versa.

a) 324°

b) $\frac{5\pi}{9}$

2. Evaluate without a calculator.

a) $\tan \frac{2\pi}{3}$

b) $\sec \frac{3\pi}{4}$

3. If $\csc x = 4$, the other 5 trig values.

$\sin x =$

$\cos x =$

$\tan x =$

$\sec x =$

$\cot x =$

4. Find $\sin \left(\cos^{-1} \left(\frac{12}{13} \right) \right)$ without a calculator.

5. Graph each function.

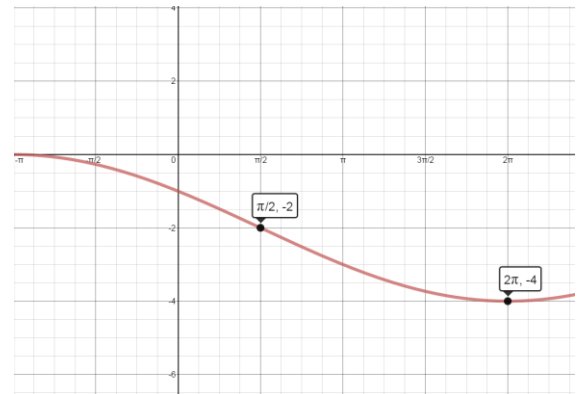
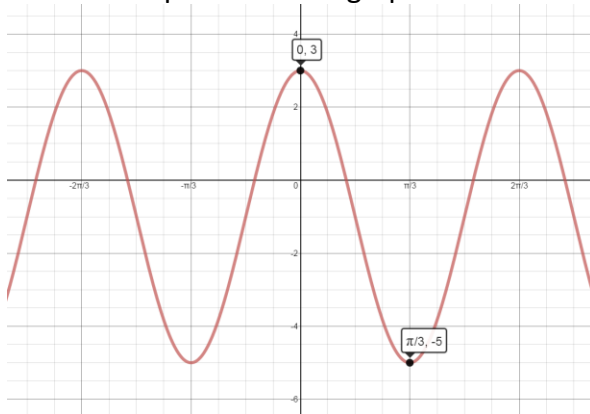
$$y = 1 + 4 \cot \left(\frac{x}{2} + \frac{\pi}{6} \right)$$

$$f(x) = 3 \sec \left(2x + \frac{3\pi}{2} \right) + 2$$

$$f(x) = -2 + 3 \csc \left(\frac{x}{4} + \frac{3\pi}{8} \right)$$

$$y = \frac{1}{4} \tan \left(4x + \frac{4\pi}{3} \right) - 1$$

6. Write the equation of the graph.



7. Solve. Pay attention to the given domain.

a) $\sin x = -0.56$; $0 \leq x < 2\pi$

b) $\cos x = 0.9832$; $0 \leq x < \pi$

c) $\tan x = -22$; $0 \leq x < -\pi$

d) $\cos x = -0.1161$; $-\frac{\pi}{2} \leq x < -\frac{3\pi}{2}$

8. Solve.

a) $-2\sin 3x - 7 = -6.2$

b) $6\cos \pi(x + 11) + 0.5 = 3.7$