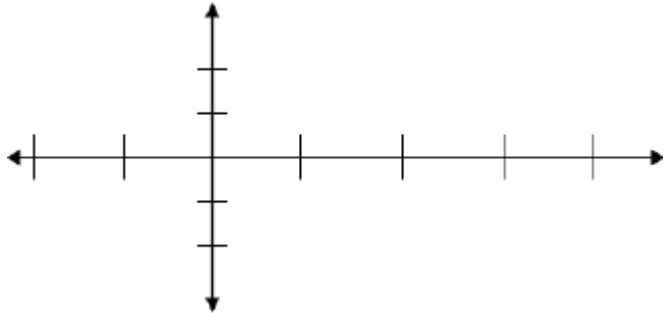**GRAPHING TRIG FUNCTIONS WORKSHEET #2**

1) Graph each function, finding the requested information.

a) y = sin x

   Domain_____   x-ints _____

   Range _____   y- int _____
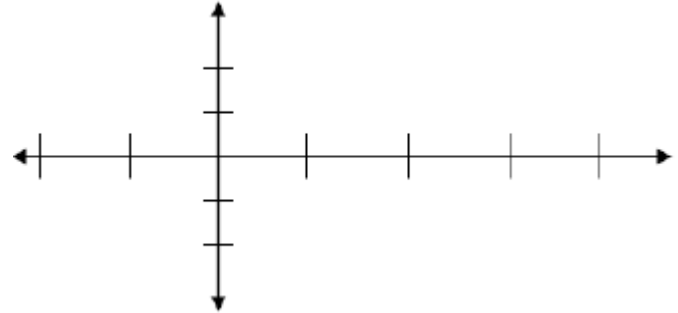
   Period _____

b) y = cos x

   Domain_____   x-ints _____

   Range _____   y- int _____

   Period _____
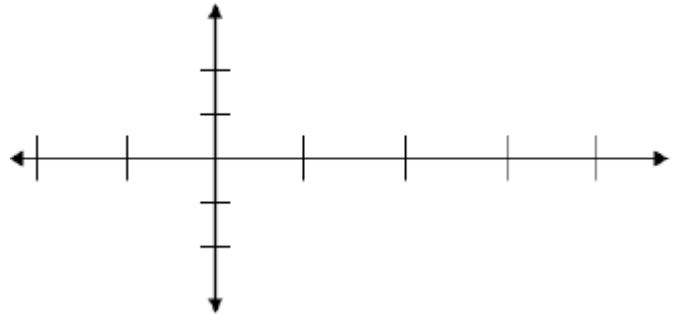
c) y = tan x

   Domain_____   x-ints _____

   Range _____   y- int _____

   Period _____

2) For each trig function below, identify the applicable values: amplitude, period, phase shift, vertical displacement, and whether the graph is reflected.

a) $y = \sin 6x$

b) $y = -5\cos \pi x$

c) $y = 2 + 3\tan \frac{\pi}{4}(x-3)$

d) $y = \cos \frac{\pi}{3}x - 4$
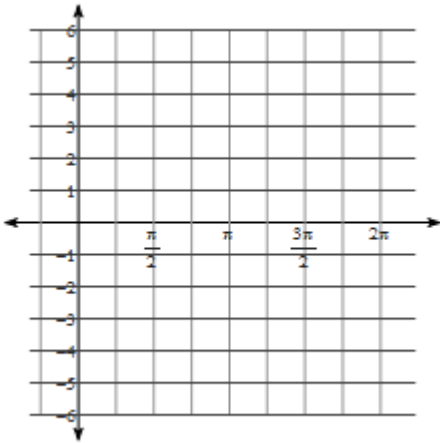
e) $y = 3\cos(2x + \pi) + 1$

f) $y = 1 - \sin 2x$

3) Graph the trig functions, finding the applicable values first: amplitude, period, phase shift, vertical displacement, and whether graph is reflected.
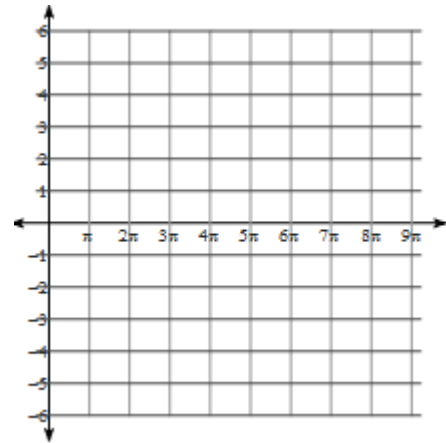
a) $f(x) = 4\sin 2x$

   amplitude: _____

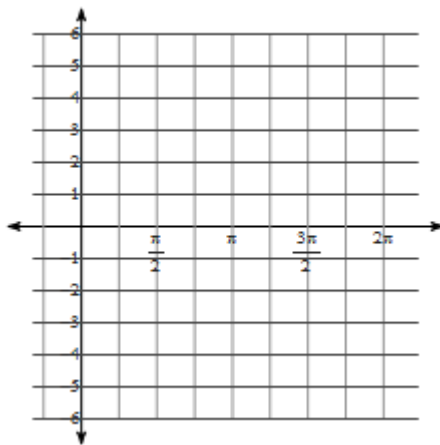   period: _____

b) $y = -3\cos\frac{x}{3}$

   amplitude: _____

   period: _____

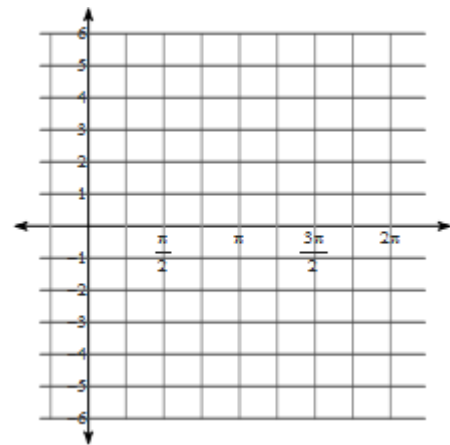c) $y = \tan x - \dfrac{\pi}{2}$

   amplitude: _____

   period: _____

d) $f(x) = 2\sin 3x + 2$

   amplitude: _____

   period: _____

4) Write an equation of a cosine function with amplitude 3, a period of π, a phase shift of $\dfrac{\pi}{4}$ to the left, and translated 1 unit up.

5) Write an equation of a sine graph with a phase shift right 3, a period of 5π, a vertical translation down 6 and an amplitude of 3.