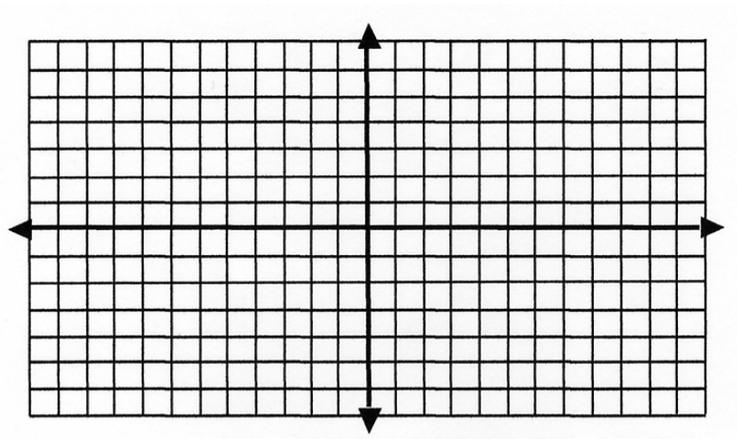
Pre-Calculus 12
Ch. 8 (Part II) Review

Name:_____

A. Graph $y = \sin x$ for $-2\pi \le x \le 2\pi$.



B.

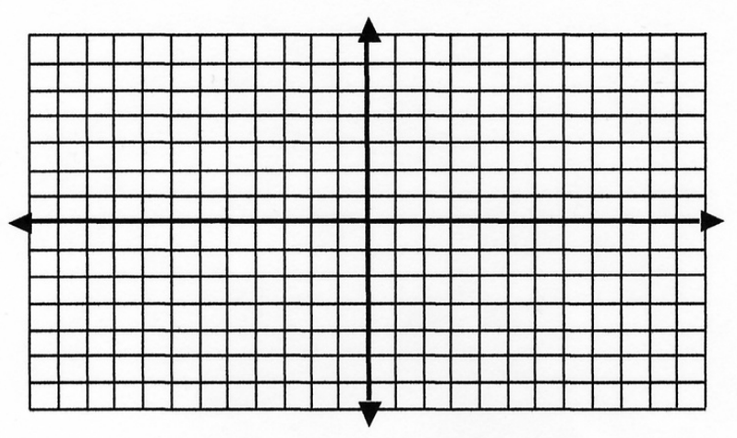
General equation of x-intercepts:

_____

Period: _____

Range: _____

A. Graph $y = \tan x$ for $-2\pi \le x \le 2\pi$.



B.

Domain: _____

Period: _____

Range: _____

General equation of asymptotes:

_____

D/E. Graph 2 complete cycles of $y = -\cos 4\left(x + \frac{\pi}{3}\right) + 2$. Label axis and scale

Amplitude: _____

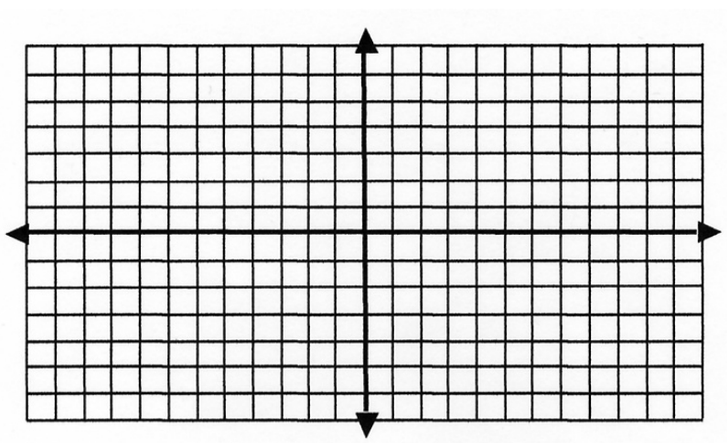
Centre line: _____

Maximum: _____

Minimum: _____

Period : _____

Phase Shift : _____



E. List the following characteristics below for $y = -2\sin\left(2x + \frac{\pi}{3}\right) - 4$

Period: _____

Amplitude: _____

Domain: _____

Centre Line: _____

Range: _____

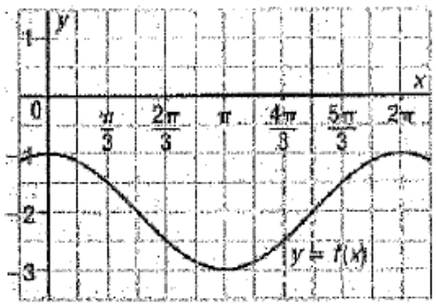
Maximum: _____

Phase Shift: _____

Minimum: _____

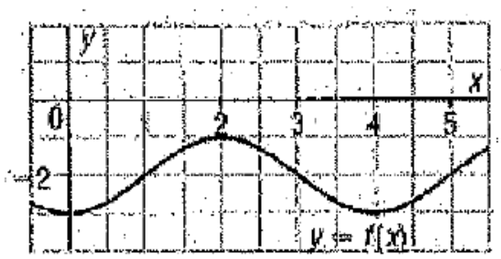
F. Determine a **sine** equation for the functions graphed below.

a)



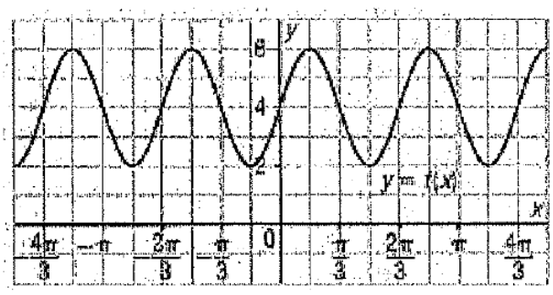
a) _____

b)



b) _____

F. Determine a **cosine** equation for the functions graphed below.



_____

D/E. Graph 2 complete cycles of $y = 4\sin\frac{\pi}{4}(x+3)+1$. Label axis and scale

Amplitude: _____

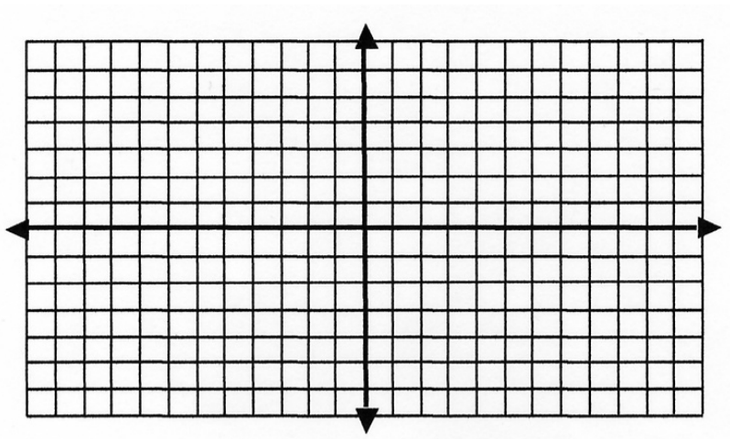
Centre line: _____

Maximum: _____

Minimum: _____

Period : _____

Phase Shift : _____



G. A piston moves vertically in a cylinder starting from its maximum height. Every 20 seconds, the piston repeats its cycle from a minimum height of 15cm to a maximum height of 35cm back to a minimum height of 15cm.

a) Sketch a graph to model this situation.

b) Determine a sinusoidal function that models the height, h centimeters, of the piston at time t seconds after it begins moving.

H. Determine the height of the piston 26 seconds after it begins moving. Give answer to the nearest centimeter.