

Applied Math 40S

Sinusoidal Review Name _____

NOTE: Unless mentioned otherwise, **round all values to two decimal places.**

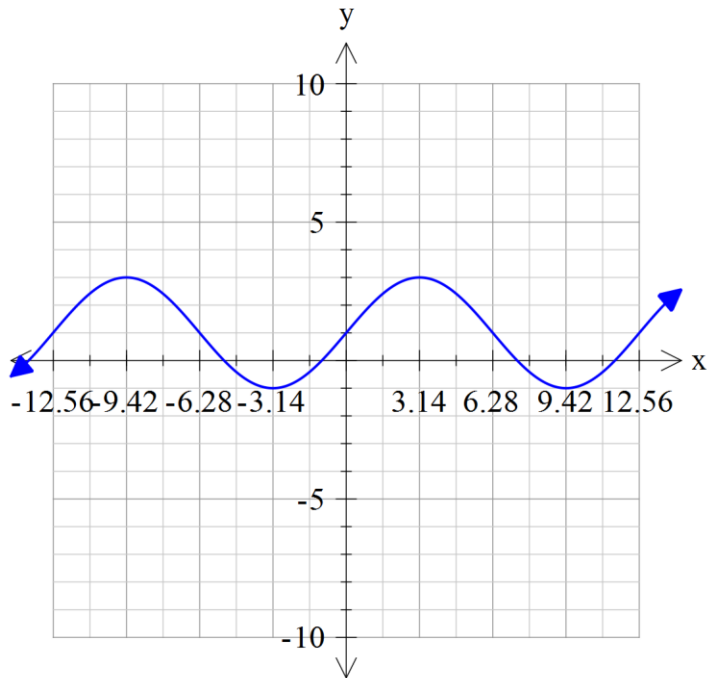
1. Fill in the chart with the information required for the two sinusoid functions below: (Degrees!)

A. $y = 2 \sin 3(x - 45^\circ) + 5$

B. $y = 3 \sin 0.5(x + 30^\circ) - 1$

Question	Maximum	Minimum	Midline	Period (in degrees)	Amp	Range	Horizontal Shift (L or R by . . .)
A							
B							

2. Find A, B, C, D and the sinusoidal equation for the **sine** function below:



A _____ B _____ C _____ D _____

y = _____

NOTE: For the remaining questions be sure your calculator is set to RADIAN mode. Use MODE, line 3 to change.

3. a. Find the sinusoidal equation, **to two decimal places**, for the data given below :

X	2	5	9	11	15	21	23	28
y	-3	-7	-2	3	9	10	6	-1

Equation: _____

- b. Find “y” when x = 12

- c. Find **two different** values of “x” when y = 5.

4. A Ferris wheel has a period of 40 seconds. It begins at its minimum height of 5 m and the maximum height is 25 m. Complete the table below for one cycle of the Ferris wheel and find the equation of the sinusoid to two decimal places.

Time (x)	Height (y)

Equation: _____

5. Give the equation of the **cosine** curve that has a maximum at 3, a minimum at -7, a period of 1.57 and a horizontal shift one space to the left (starting point).
6. A **sine** function has a maximum at (-3, 7) and its next minimum is at (1, -1). Fill in the chart and find the equation of this sinusoid.

Position	x	y

a) Equation: _____

b) Find the value of curve when x = 3.6 _____

c) List two different positive x-values when y = 5. _____