

Homework

$$y = \underline{3} \sin(x - \underline{60}) + \underline{0} \quad (x, y) \rightarrow \left(\begin{array}{l} x \\ k \end{array} + C, Ay + D \right)$$

A = 3

k = 1

C = 60

D = 0

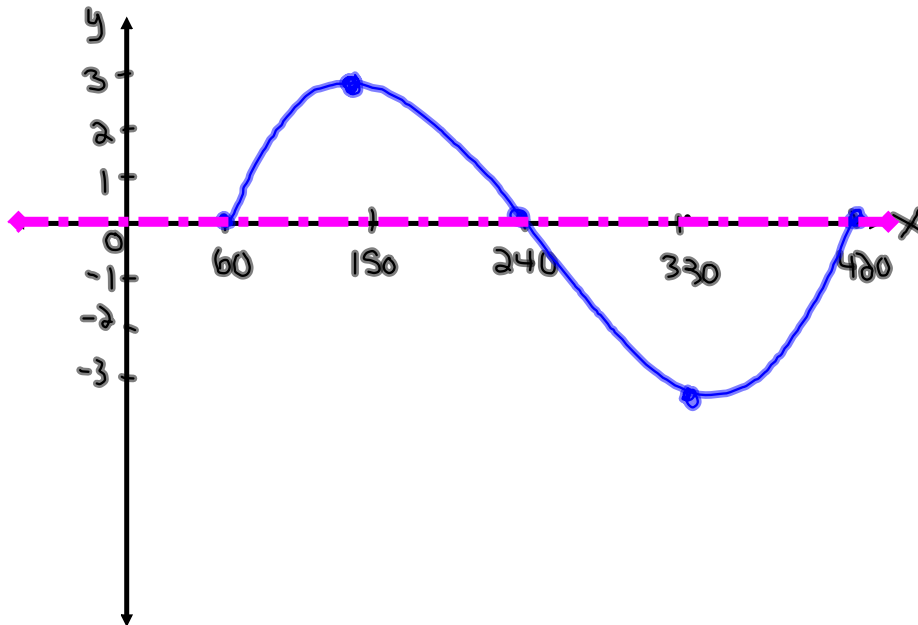
P = $\frac{360}{1} = 360$

$y = \sin x$

x	y
0	0
90	1
180	0
270	-1
360	0

New points after mapping

x	y
60	0
150	3
240	0
330	-3
420	0



$$y = -3 \cos[2(x + 30)] + 1 \quad (x, y) \rightarrow \left(\frac{x}{k} + C, Ay + D \right)$$

A =

k =

C =

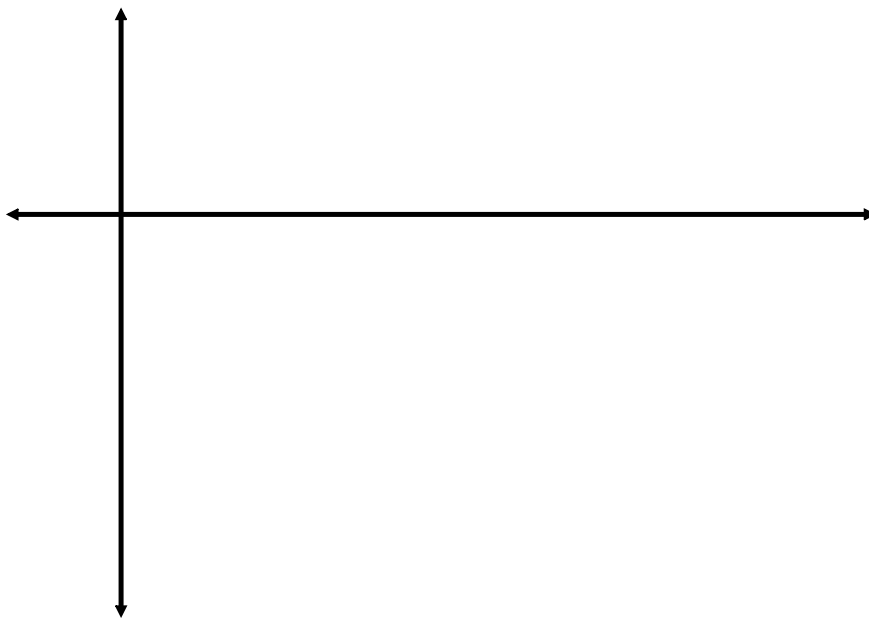
D =

P =

θ	y
0	
90	
180	
270	
360	

New points after mapping 

θ	y



State **A**, **k**, **C**, **D**, and **P** from the following sinusoidal equations:

$$y = \underline{-4} \sin(\underline{3}(\theta + \underline{90})) \underline{-1}$$

$$A = 4$$

$$k = 3$$

$$C = -90$$

$$D = -1$$

$$P = \frac{360}{3} = 120$$

$$y = \underline{2} \cos(\theta - \underline{30}) \underline{+3}$$

$$A = 2$$

$$k = 1$$

$$C = 30$$

$$D = 3$$

$$P = \frac{360}{1} = 360$$

State **A**, **k**, **C**, **D**, and **P** from the following sinusoidal equations:

$$y = \frac{1}{2} \sin\left[\frac{1}{2}(\theta - \underline{\underline{60}})\right] - 2$$

$$A = \frac{1}{2}$$

$$k = \frac{1}{2}$$

$$C = 60$$

$$D = -2$$

$$P = \frac{360}{\frac{1}{2}} = 720$$

$$y + 2 = \sin(3\theta - 90)$$

(Put in standard form!)

$$y = \sin[3(\theta - 30)] - 2$$

$$A = 1$$

$$k = 3$$

$$C = 30$$

$$D = -2$$

$$P = \frac{360}{3} = 120$$

Graph the following:

$$y = -2 \cos[2(x - 90)] - 3 \quad (x, y) \rightarrow \left(\frac{x}{k} + C, Ay + D \right)$$

A = 2

k = 2

C = 90

D = -3

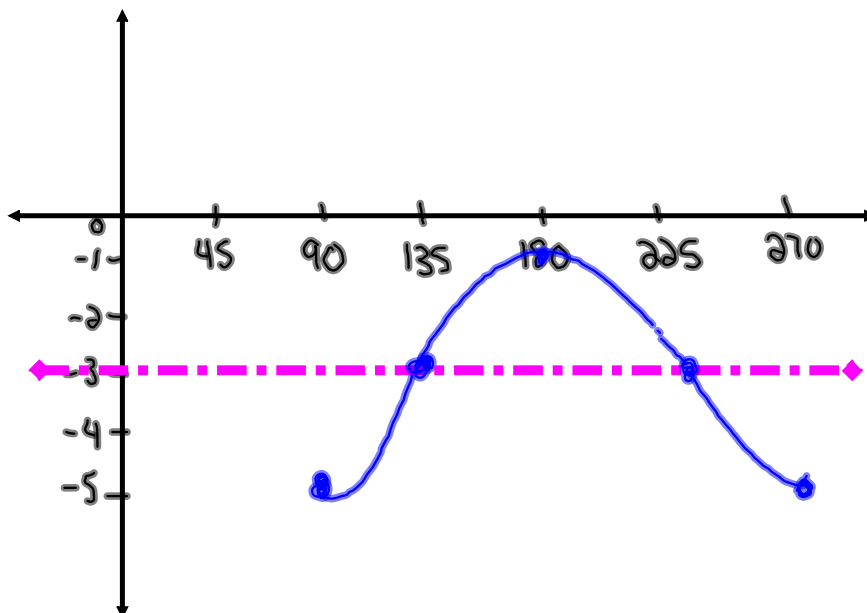
P = $\frac{360}{2} = 180$

$y = -\cos x$

x	y
0	-1
90	0
180	1
270	0
360	-1

New points after mapping

x	y
90	-5
135	-3
180	-1
225	-3
270	-5



Homework

$$\textcircled{1} y = 3\cos(\theta) - 2$$

$$\textcircled{6} \frac{y-1}{2} = 2\cos(\theta+45^\circ) + 0$$

$$y-1 = 4\cos(\theta+45^\circ) + 0 + 1$$

$$y = 4\cos(\theta+45^\circ) + 1$$

