Homework

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

A = 3

k = 1

C = 60

D = 0

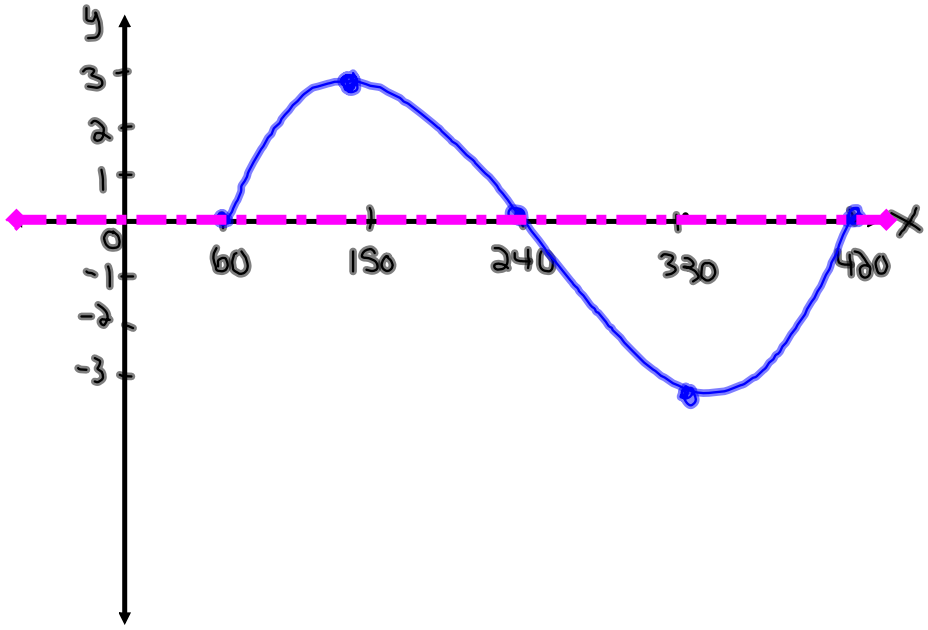
P = $\frac{360}{1} = 360$

$y = \sin x$

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



$$y = 3\cos[2(x+30)]+1$$

$$(x, y) \rightarrow \left(\frac{x}{k}+C, Ay+D\right)$$

A = 3

k = 2

C = -30

D = 1

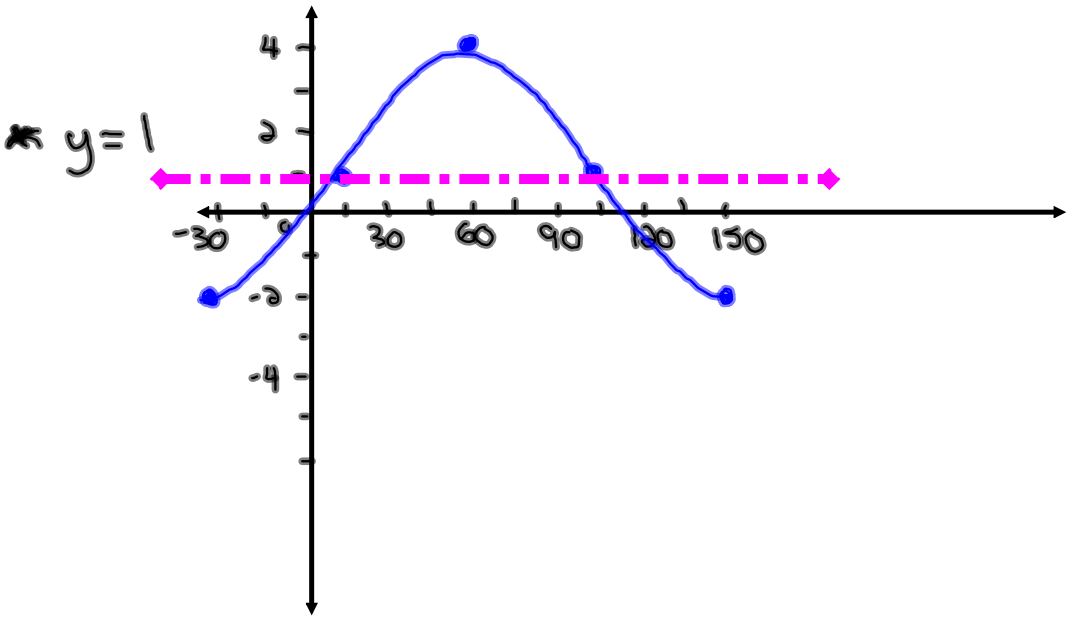
P = 180

$y = -\cos x$

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

New points after mapping

x	y
-30	-2
15	1
60	4
105	1
150	-2



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

$$y = -4\sin[3(\theta + 90)] - 1$$

A = 4

k = 3

C = -90

D = -1

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

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

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:

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

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:

$$y = -2\cos[2(x-90)]-3$$

$$(x, y) \rightarrow \left(\frac{x}{k} + C, Ay + D\right)$$

A = 2

k = 2

C = 90

D = -3

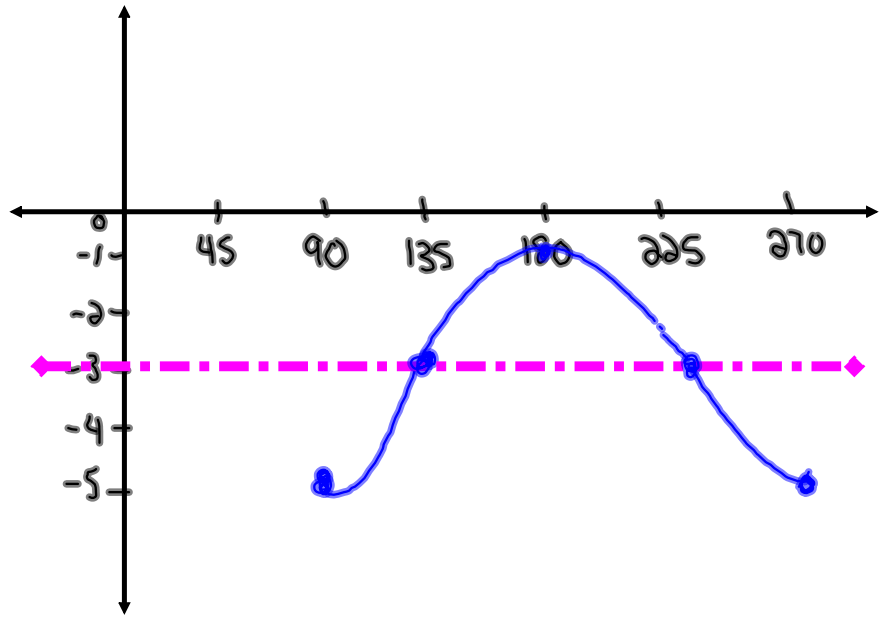
P = $\frac{360}{2} = 180$

$y = -\cos x$

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

① $y = 3\cos(\theta) - 2$

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

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

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