

# Review for Horizontal Quiz

Given the equations, describe the transformations.

$$y = \sin \frac{1}{8}x$$

HD 8

$$y = \sin 6(\theta - 75^\circ)$$

HD  $\frac{1}{6}$

HT  $75^\circ$

$$y = \cos \frac{2}{5}(x + \frac{\pi}{2})$$

HD  $5/2$

HT  $-\pi/2$

$$* y = -2 \sin 3(x - \frac{\pi}{4}) - 5$$

HD  $1/3$

HT  $\pi/4$

VD 2

Ref 1

VT -5

Write the equation based off of the following transformations:

Sine curve

h.d. of  $\frac{1}{4}$

$$y = \sin 4x$$

Cosine curve

h.t. of  $45^\circ$

$$y = \cos(\theta - 45^\circ)$$

Sine curve

Period =  $720^\circ$

h.t. of  $85^\circ$

$$B = \frac{360}{720}$$

Cosine curve

Period =  $36^\circ$

h.t. of  $-22^\circ$

$$B = \frac{360}{36} = 10$$

$$y = \sin \frac{1}{2}(\theta - 85^\circ)$$

$$y = \cos 10(\theta + 22^\circ)$$

Write the equation based off of the following transformations:

h.d. 3

h.t.  $-\frac{\pi}{6}$

$$y = \cos \frac{1}{3}(x + \frac{\pi}{6})$$

P =  $20^\circ$

h.t.  $45^\circ$

$$y = \sin 18(\theta - 45^\circ)$$

$$B = \frac{360}{20} = 18$$

P =  $\frac{\pi}{4}$

$$y = \sin 8x$$

$$B = \frac{2\pi}{\pi/4}$$

h.d.  $\frac{1}{5}$

h.t.  $\frac{2\pi}{3}$

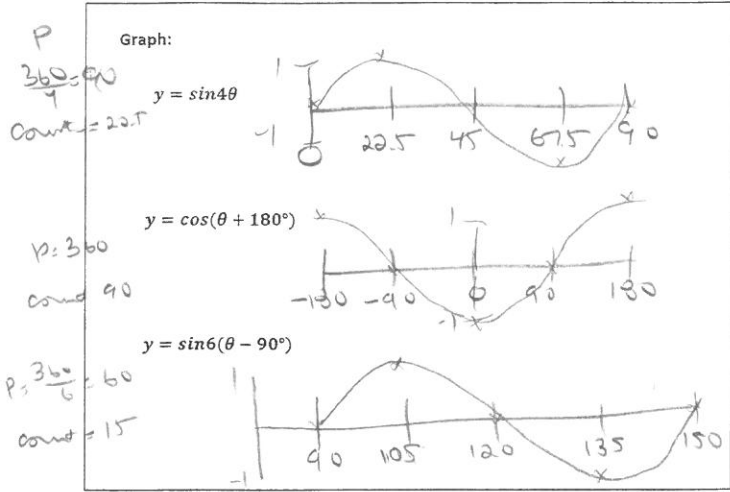
$$y = \sin 5(x - \frac{2\pi}{3})$$

h.t.  $80^\circ$

P =  $540^\circ$

$$y = \cos \frac{2}{3}(\theta - 80^\circ)$$

$$B = \frac{360}{540}$$

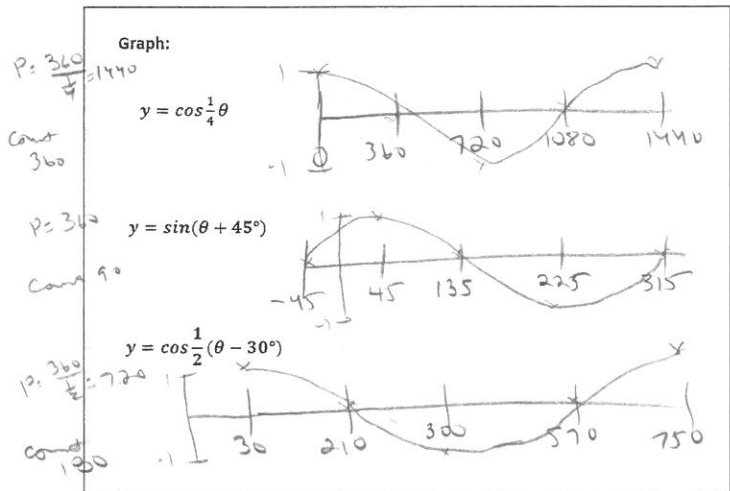


Describe the transformation:

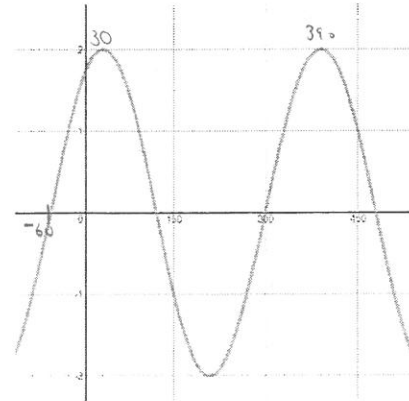
$y = \sin \frac{1}{3}\theta$     HD 3

$y = \cos(\theta + 40^\circ)$     HT  $-40^\circ$

$\star y = 5\cos(\theta - 60^\circ)$     HT  $60^\circ$   
 VD 5



$\star$  Write the equation for the given graph.

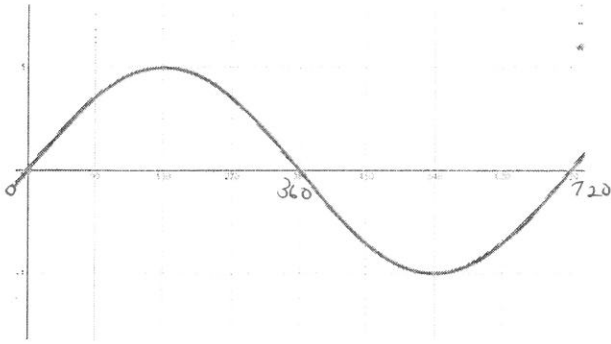


$P = 360$

$y = 2\cos(\theta - 30^\circ)$

$y = 2\sin(\theta + 60^\circ)$

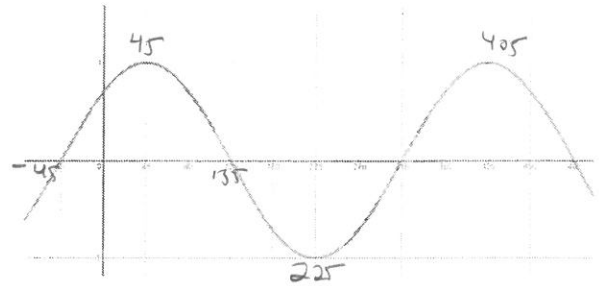
Write the equation for the given graph.



$$y = \sin \frac{1}{2} \theta$$

$$y = \cos \frac{1}{2} (\theta - 180)$$

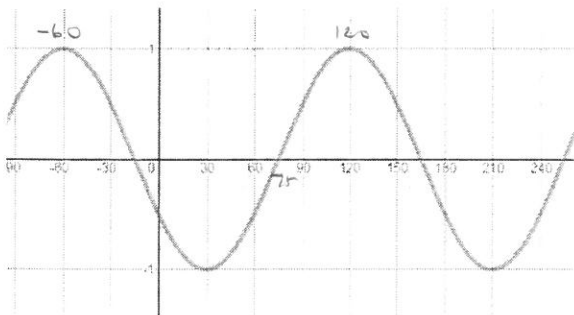
Write the equation for the given graph.



$$y = \sin(\theta + 45^\circ)$$

$$y = \cos(\theta - 45^\circ)$$

Write the equation for the given graph.



$$y = \cos 2(\theta + 60^\circ)$$

$$y = \cos 2(\theta - 120^\circ)$$

$$y = \sin 2(\theta - 75^\circ)$$

$$y = \sin 2(\theta + 15^\circ)$$

Write the equation based off of the following transformations:

Period =  $270^\circ$   
h.t. of  $-70^\circ$

$$B = \frac{360}{270}$$

$$y = \frac{4}{3}(\theta + 70^\circ)$$

Graph:

$P = \frac{360}{8} = 45$   
Count 180

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

$$y = \cos 8(\theta - 120^\circ)$$

$P = \frac{360}{8} = 45$   
Count 11.25

