

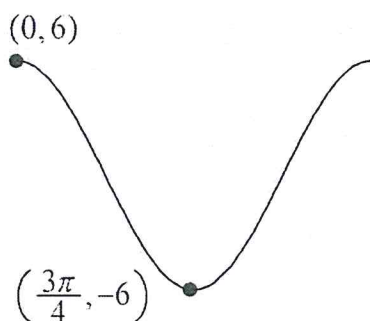
Hon Alg 2 Bellwork Tuesday, May 23, 2017

1. Graph one period of this Cosine Function. Label the coordinates of all Maximums, Minimums, and x-intercepts.

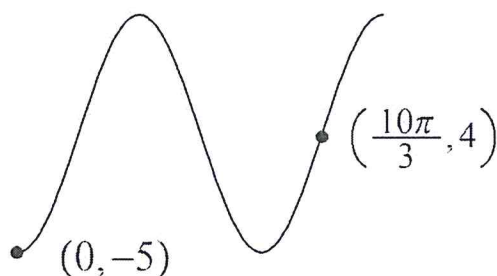
$$y = 10\cos 12x$$

2. Write the equation of each Cosine Function1.

a)



b)



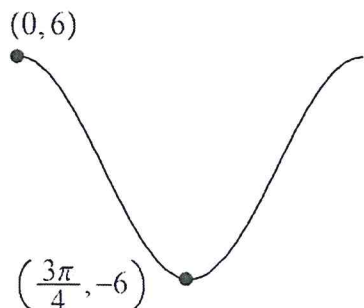
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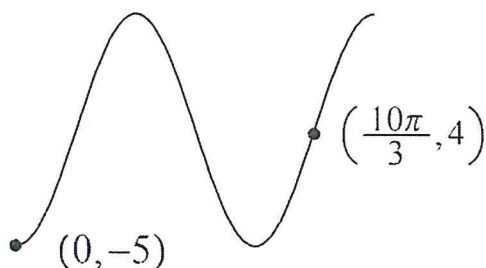
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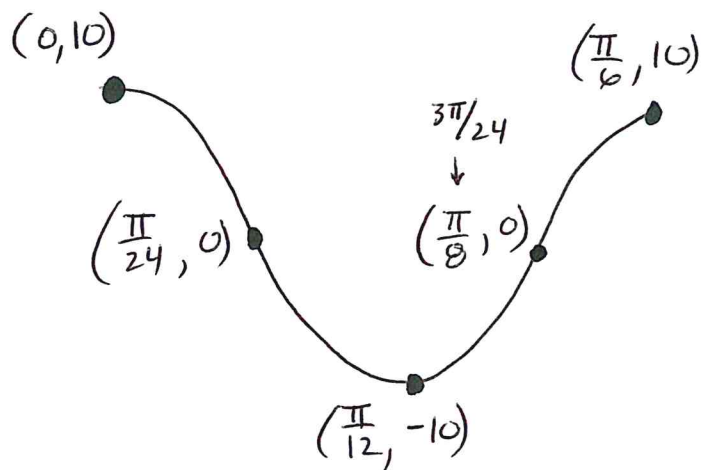
b)



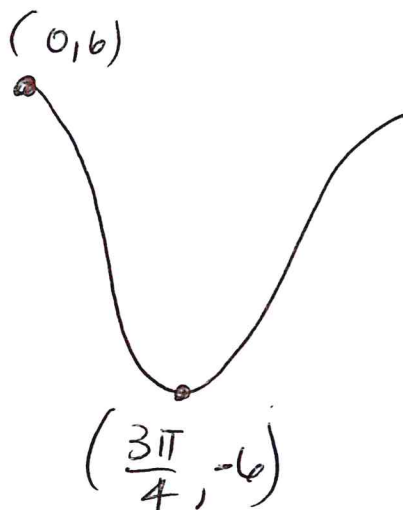
① $y = 10 \cos 12x$

Amplitude = 10

period = $\frac{2\pi}{12} = \frac{\pi}{6}$



② a)



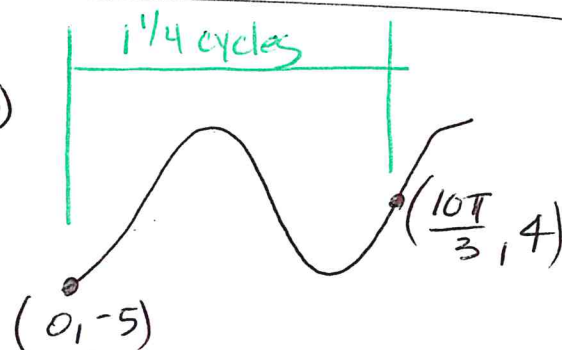
• Amplitude = 6

• period = $\frac{3\pi}{4} \times 2 = \frac{3\pi}{2}$

• $b = \frac{2\pi}{\frac{3\pi}{2}} = 2\pi \cdot \frac{2}{3\pi} = \frac{4}{3}$

$$y = 6 \cos\left(\frac{4x}{3}\right)$$

b)



• upside down

• Amplitude = 9

• midline: $y = 4$

• period = $\frac{\frac{10\pi}{3}}{\frac{5}{4}} = \frac{10\pi}{3} \cdot \frac{4}{5} = \frac{8\pi}{3}$

$b = \frac{2\pi}{\frac{8\pi}{3}} = 2\pi \cdot \frac{3}{8\pi} = \frac{3}{4}$

$$y = -9 \cos\left(\frac{3x}{4}\right) + 4$$