

# COACH CURLETTE

\* Find the amp, period, midline

$$\textcircled{1} y = 3 \cos(2\theta) - 4$$

$$\begin{aligned} \text{amp} &= 3 \\ \text{period} &= \frac{2\theta = 2\pi}{\theta = \pi} \\ \text{midline} &= y = \end{aligned}$$

$$\textcircled{2} y = 5 \sin\left(\frac{\theta}{3}\right) + 2$$
$$\frac{\theta}{3} = 2\pi$$

$$\begin{aligned} \text{amp} &= 5 \\ \text{period} &= 6\pi \\ \text{midline} &= y = 2 \end{aligned}$$

$$\textcircled{3} y = -4 \cos\left(\frac{3\theta}{2}\right)$$

Starts @  
bottom  
amp

$$\frac{3\theta}{2} = 2\pi$$

$$3\theta = 4\pi$$

$$\theta = \frac{4\pi}{3}$$

$$\begin{aligned} \text{amp} &= 4 \\ \text{period} &= \frac{4\pi}{3} \\ \text{midline} &= y = 0 \end{aligned}$$

1 year  
time

\* Graph ▲ last week

①  $y = \sin(\theta)$

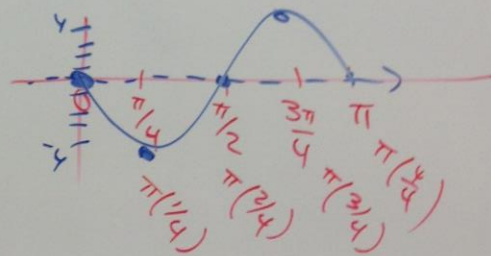
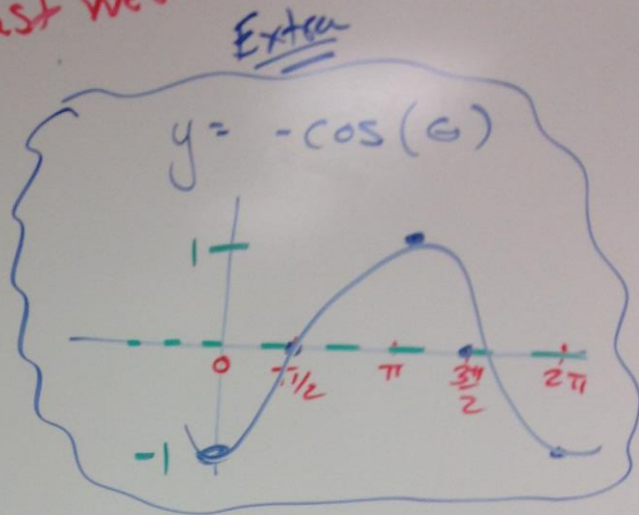
②  $y = \cos(\theta)$

③  $y = 3 \sin\left(\frac{\theta}{5}\right) - 2$

④  $y = 2 \cos(3\theta) + 1$

⑤  $y = -4 \sin(2\theta)$   
 $2\theta = 2\pi$   
 $\theta = \pi$

⑥  $y = -2 \cos\left(\frac{\theta}{3}\right)$



← yesterday

⑦  $y = 2 \sin(\theta - \pi) + 1$  →

⑧  $y = 3 \cos\left(\frac{\theta}{2} + 2\pi\right) - 4$

period  
 $\frac{4\pi}{3}(0) = 0 + \pi = \pi$  phase shift

⑨  $y = -3 \sin\left(\frac{3\theta}{2} - \pi\right) + 2$

period  $\left\{ \begin{array}{l} \frac{3\theta}{2} = 2\pi \\ \theta = \frac{4\pi}{3} \end{array} \right.$  phase shift  $+ \pi$

$\frac{4\pi}{3}\left(\frac{1}{4}\right) = \frac{4\pi}{12} + \frac{12\pi}{12} = \frac{16\pi}{12} = \frac{4\pi}{3}$

$\frac{4\pi}{3}\left(\frac{2}{4}\right) = \frac{8\pi}{12} + \frac{12\pi}{12} = \frac{20\pi}{12} = \frac{5\pi}{3}$

$\frac{4\pi}{3}\left(\frac{3}{4}\right) = \frac{12\pi}{12} + \frac{12\pi}{12} = \frac{24\pi}{12} = 2\pi$

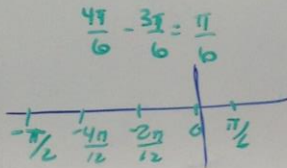
⑩  $y = -2 \cos\left(3\theta + \frac{\pi}{2}\right) + 3$

$\frac{2\pi}{3}(0) = 0 - \frac{\pi}{2} = -\frac{\pi}{2}$   $\frac{2\pi}{3}\left(\frac{1}{4}\right) = \frac{2\pi}{3} - \frac{\pi}{2} = \frac{4\pi}{6} - \frac{3\pi}{6} = \frac{\pi}{6}$

$\frac{2\pi}{3}\left(\frac{1}{4}\right) = \frac{2\pi}{12} - \frac{\pi \cdot 6}{2 \cdot 6} = -\frac{4\pi}{12}$

$\frac{2\pi}{3}\left(\frac{2}{4}\right) = \frac{4\pi}{12} - \frac{\pi \cdot 6}{2 \cdot 6} = -\frac{2\pi}{12}$

$\frac{2\pi}{3}\left(\frac{3}{4}\right) = \frac{6\pi}{12} - \frac{\pi \cdot 6}{2 \cdot 6} =$



#7

$$y = 2 \sin(\theta - \pi) + 1$$

amp 2  
 period  $2\pi$   
 phase shift  $+\pi$   
 y=1  
 pts. on x-axis

Alg-II-CC

# Alg-II-CC-1st-Semester

# Alg-II-CC-2nd-Semester

phase shift  
 $\pi = \pi$   
 $\frac{\pi}{1} = \frac{16\pi}{12} = \frac{4\pi}{3}$   
 $\frac{\pi}{2} = \frac{80\pi}{12} = \frac{5\pi}{3}$   
 $\frac{3\pi}{4} = \frac{24\pi}{12} = 2\pi$   
 $\frac{3\pi}{4} = \frac{7\pi}{3}$

period

$$2\pi(0) = 0 + \pi = \pi$$

$$2\pi(1/4) = \frac{\pi}{2} + \frac{2\pi}{2} = \frac{3\pi}{2}$$

$$2\pi(2/4) = \pi + \pi = 2\pi$$

$$2\pi(3/4) = \frac{3\pi}{2} + \frac{2\pi}{2} = \frac{5\pi}{2}$$

$$2\pi(4/4) = 2\pi + \pi = 3\pi$$

