

# Advanced Math

4-5

(Day 2)

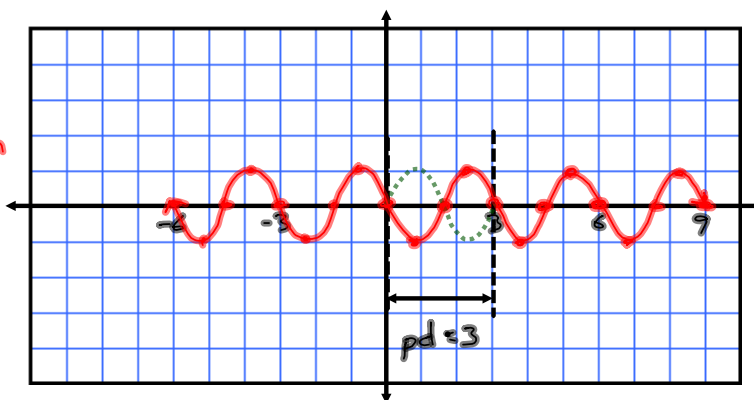
## Graphs of Sine and Cosine Functions

47) Graph  $y = -\sin \frac{2\pi x}{3}$ .

Amp: 1

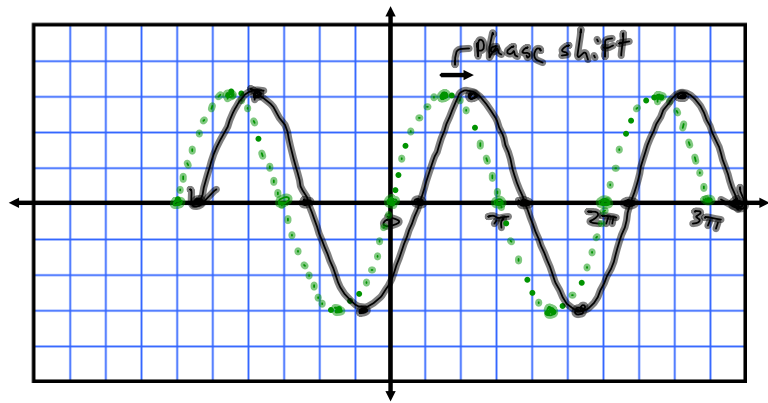
Flips  
upside  
down

$$\text{pd: } \frac{2\pi}{\frac{2\pi}{3}} = \frac{2\pi}{1} \cdot \frac{3}{2\pi} = 3$$



49) Graph  $y = 3\sin(x - \frac{\pi}{4})$ .

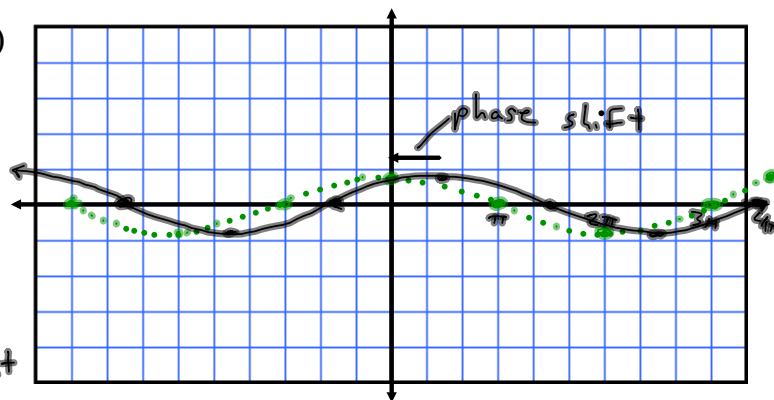
amp 3  
 pd =  $2\pi$   
 p.s. =  $\frac{\pi}{4}$  right



Green graph is  $y = 3\sin x$  without the phase shift for comparison.

59) graph  $y = \frac{2}{3} \cos(\frac{x}{2} - \frac{\pi}{4})$

amp:  $\frac{2}{3}$   
 pd:  $\frac{2\pi}{\frac{1}{2}} = 4\pi$   
 p.s.  $\frac{\frac{\pi}{4}}{\frac{1}{2}} = \frac{\pi \cdot 2}{4 \cdot 1} = \frac{\pi}{2}$  right



Green: graph  $y = \frac{2}{3} \cos(\frac{x}{2})$  without phase shift.

Assignment:

pg. 410

44-60 even,

69-76 all.