

p394 1-27, skip divisible by 4

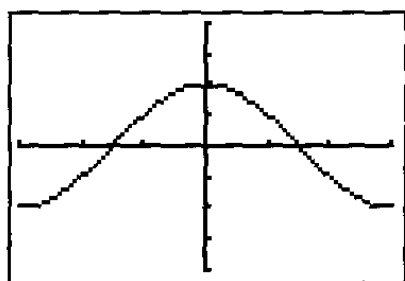
2. Amplitude $\frac{2}{3}$; vertical shrink by a factor of $\frac{2}{3}$

6. Amplitude 2.34; vertical stretch by a factor

10. Period 5π ; horizontal stretch by a factor of $\frac{1}{0.4} = 2.5$, reflection across y-axis

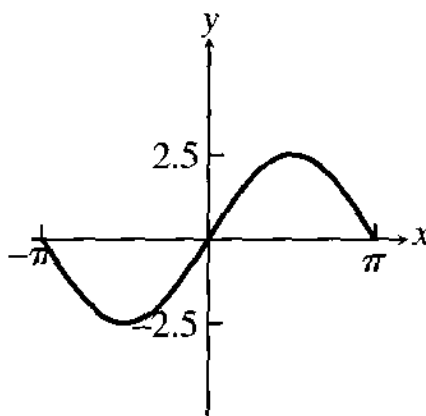
14. Amplitude 2, period 6π ,

frequency $\frac{1}{6\pi}$

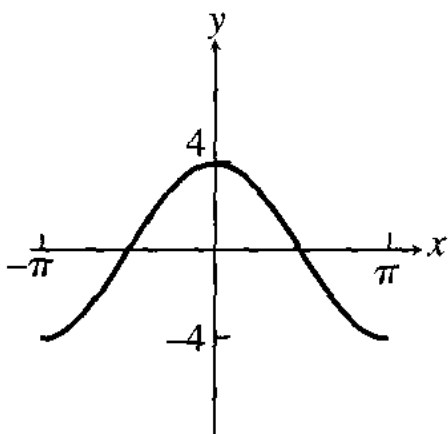


$[-3\pi, 3\pi]$ by $[-4, 4]$

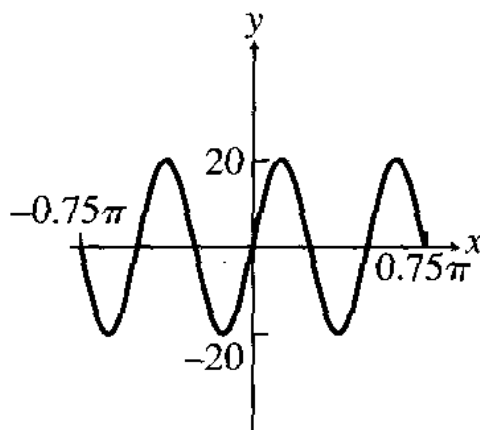
18.



22.



26.



Graphs of Sinusoids

$$y = a \sin [b(x-h)] + k$$

$$y = a \cos [b(x-h)] + k$$

$$\text{Amplitude} = |a|$$

$$\text{Period} = \frac{2\pi}{|b|}$$

$$\text{Frequency} = \frac{|b|}{2\pi}$$

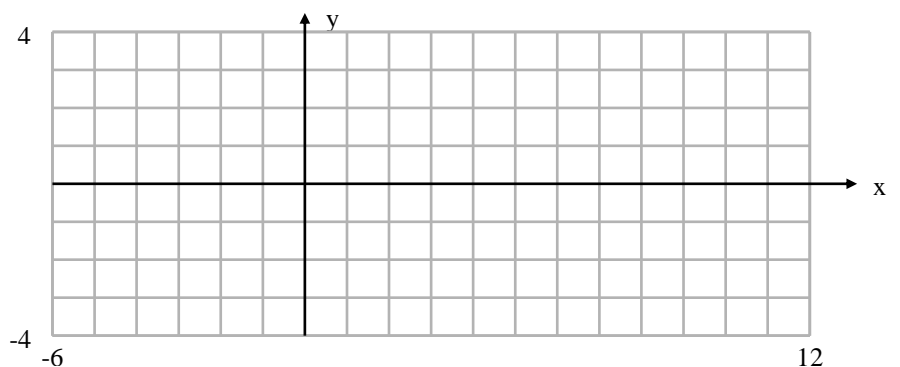
$$\text{Phase Shift} = h$$

$$\text{Vertical Translation} = k$$

1. How are the graphs of Sin and Cosine related?

2. Graph three periods of the function using your understanding of transformations.

$$y = 4 \sin 3x$$



3. Identify the maximum and minimum values and zeros of the function in the interval $[-2\pi, 2\pi]$.

$$y = 3 \cos \frac{x}{2}$$

$$y = -2 \sin x$$

4. Describe the transformations required to obtain the graph of the given function from a basic trig function.

$$y = 1.5 \cos 4x$$

$$y = -2 \sin \frac{\pi x}{4}$$

5. Describe the transformations required to obtain the graph of y_2 from the graph of y_1 .

$$y_1 = 3 \sin \frac{2\pi x}{3}$$

$$y_2 = 2 \sin \frac{\pi x}{3}$$

6. Select the pair of functions that have identical graphs.

$$y = \sin\left(2x + \frac{\pi}{4}\right)$$

$$y = \cos\left(2x - \frac{\pi}{2}\right)$$

$$y = \cos\left(2x - \frac{\pi}{4}\right)$$