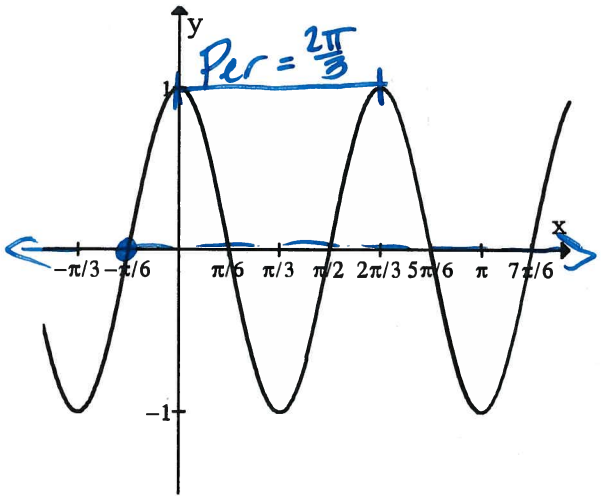
PRACTICE

1. Write the equation of the graph as a **sine** function



$a = 1$

$d = 0$

$y = 1\sin(bx - c) + 0$

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

$\frac{6\pi}{2\pi} = \frac{b2\pi}{2\pi}$

$3 = b$

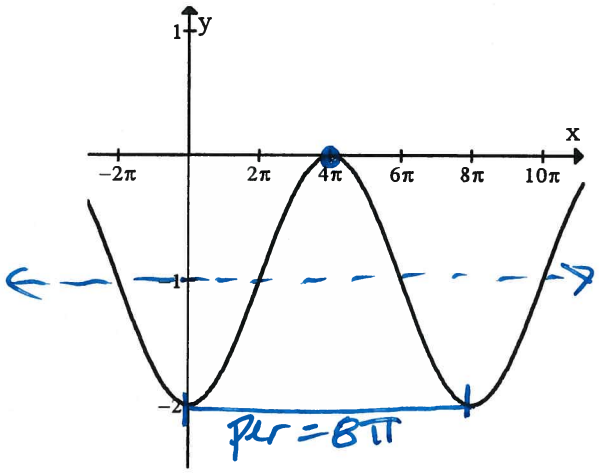
$bx - c = 0$

$3\left(-\frac{\pi}{6}\right) - c = 0$

$-\frac{\pi}{2} = c$

$$y = 1\sin\left(3x + \frac{\pi}{2}\right) + 0$$

2. Write the equation of the graph as a **cosine** function



$a = 1$

$d = -2$

$y = 1\cos(bx - c) - 2$

$\frac{2\pi}{b} = \frac{8\pi}{1}$

$\frac{2\pi}{8\pi} = \frac{b(8\pi)}{8\pi}$

$\frac{1}{4} = b$

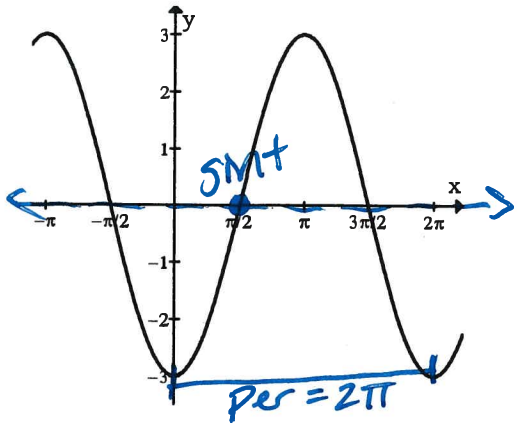
$bx - c = 0$

$\frac{1}{4}(4\pi) - c = 0$

$\pi = c$

$$y = 1\cos\left(\frac{1}{4}x - \pi\right) - 2$$

3. Write the equation of the graph as a **sine** function



$y = 1\sin(bx - c) + 0$

$\frac{2\pi}{b} = \frac{2\pi}{1}$

$b = 1$

$bx - c = 0$

$1(\frac{\pi}{2}) - c = 0$

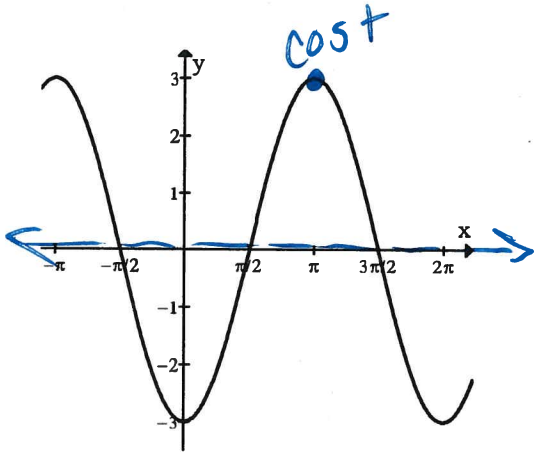
$\frac{\pi}{2} = c$

$a = 3$

$d = 0$

$y = 1\sin(1x - \frac{\pi}{2}) + 0$

4. Write the equation of the graph as a **cosine** function



$y = 1\cos(bx - c) + 0$

$b = 1$

$bx - c = 0$

$1(\pi) - c = 0$

$\pi = c$

$a = 3$

$d = 0$

$y = 1\cos(1x - \pi) + 0$