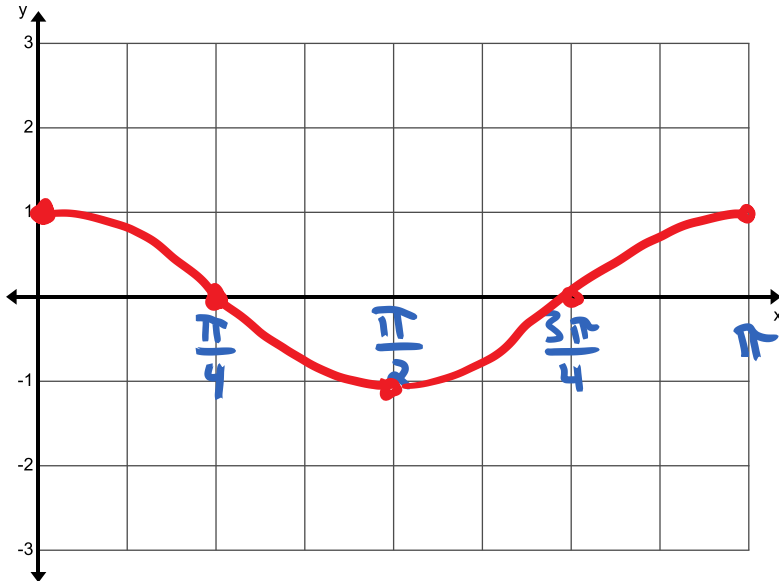


1.) Graph one cycle of $y = \cos 2x$



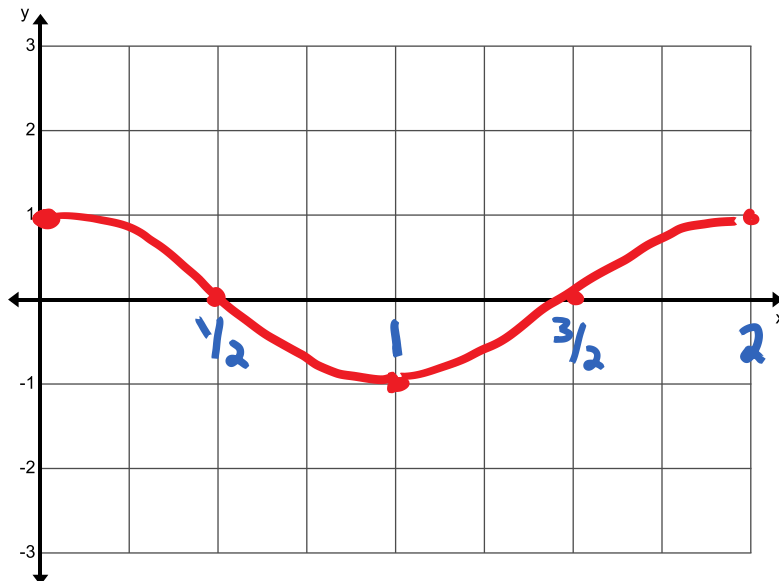
$$y = a \cos bx$$

$$\text{period} = \frac{2\pi}{b}$$

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

$$= \pi$$

2.) Graph one cycle of $y = \cos(\pi x)$



$$\text{period} = \frac{2\pi}{b}$$

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

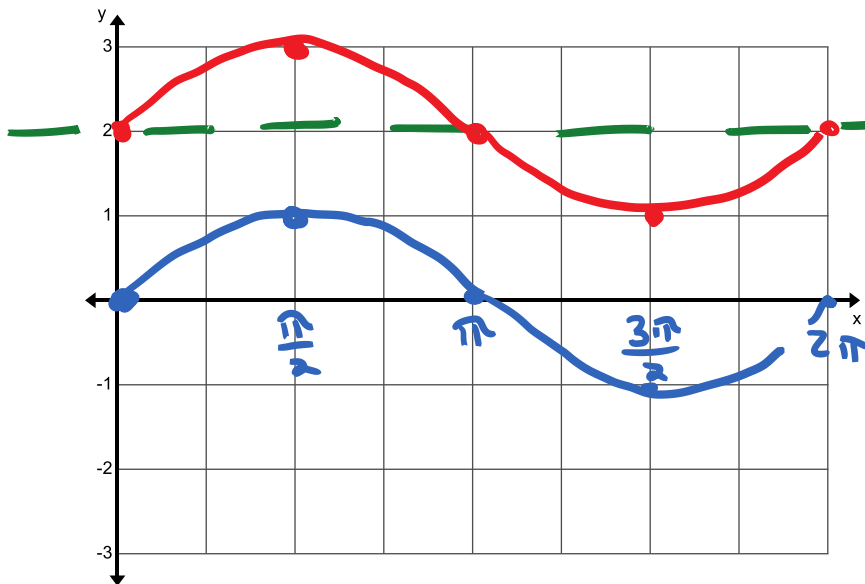
$$= 2$$

amplitude \downarrow $y = a \sin bx + c$ \downarrow midline

Standard Form: _____

3.) Graph one cycle of $y = \sin x$

b. Graph one cycle of $y = \sin x + 2$ and find the midline.

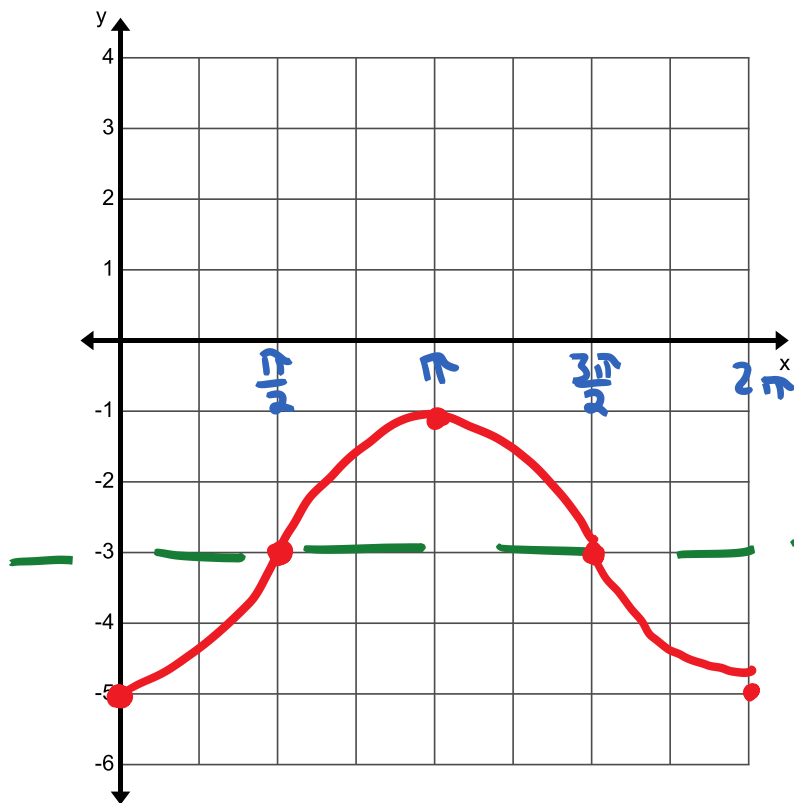


midline
 $y = 2$

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

a b c

4.) Graph one cycle of $y = -2 \cos x - 3$ and find the midline.

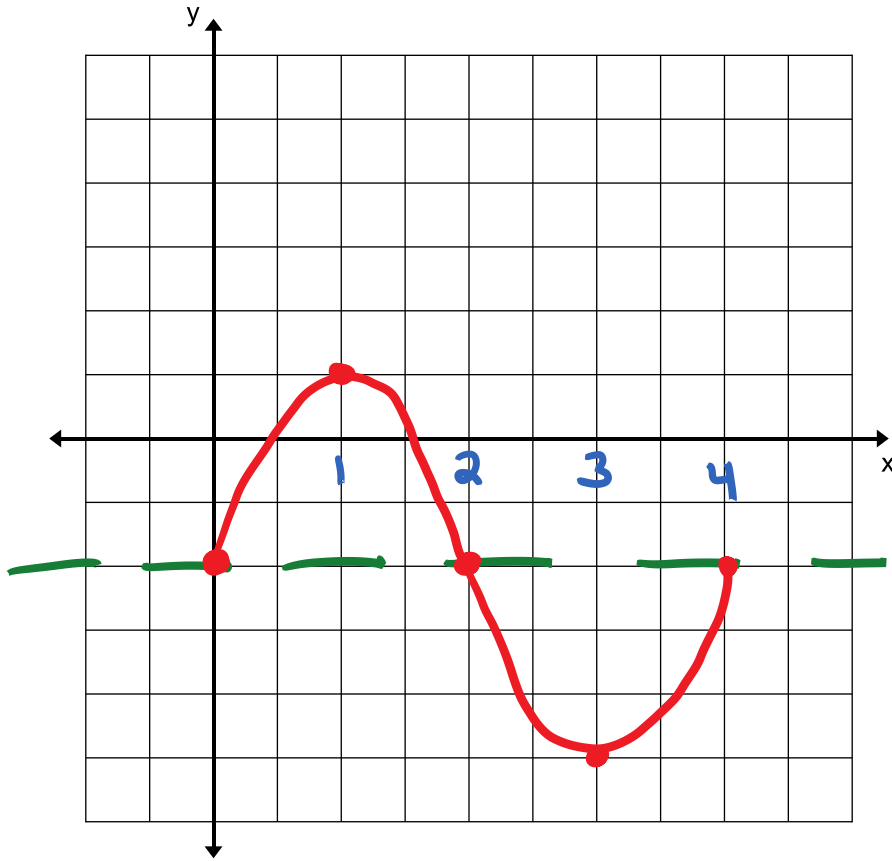


period = $\frac{2\pi}{b}$
 $= \frac{2\pi}{1}$
 $= 2\pi$

midline
 $y = -3$

a b c

5.) Graph one cycle of $y = 3 \sin \frac{\pi}{2}x - 2$



$$\text{period} = \frac{2\pi}{b}$$

$$\text{period} = \frac{2\pi}{\frac{\pi}{2}}$$

$$\text{period} = 2\pi \div \frac{\pi}{2}$$

$$2\pi \cdot \frac{2}{\pi}$$

$$\text{period} = \boxed{4}$$

6.) Sketch one cycle of a sine curve with an amplitude of 2, a midline of $y = -3$, and a period of 2π .

