

F & T
Standard Form

Name _____

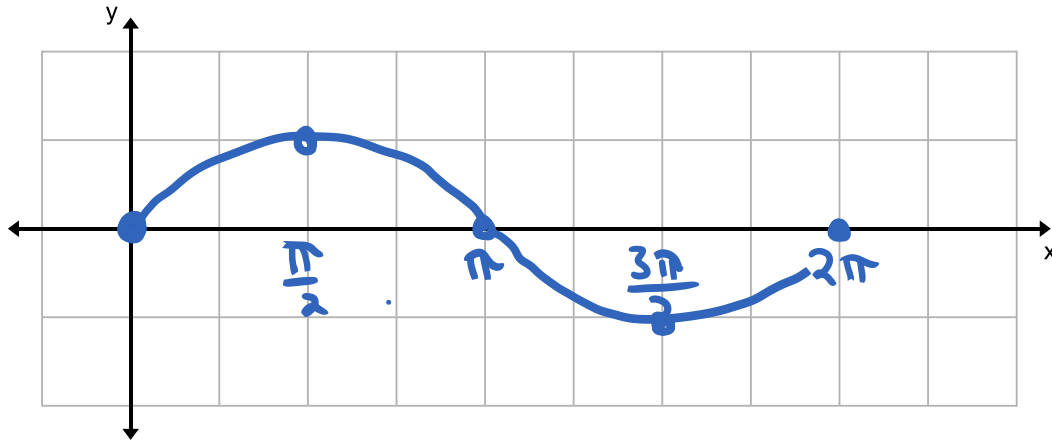
Standard Form of a Trig. Function: _____

amplitude
 $y = a \sin bx$

Period: the width of one complete cycle

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

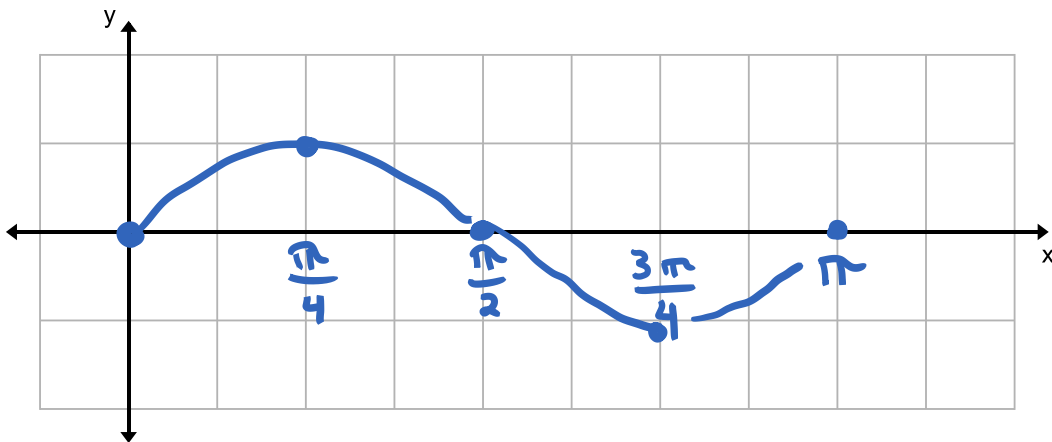
Period: 2π



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

b. Graph one cycle of $y = \sin 2x$

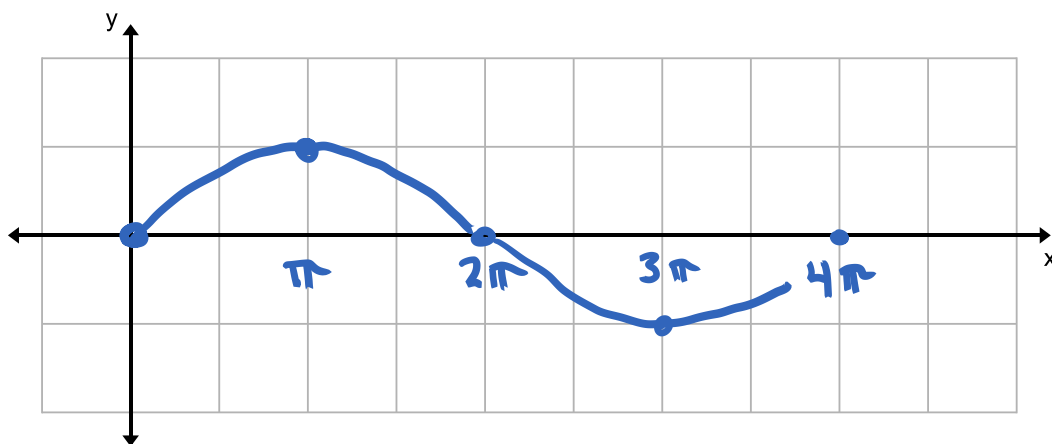
Period: $\frac{2\pi}{2} = \pi$



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

c. Graph one cycle of $y = \sin \frac{1}{2}x$

Period: 4π



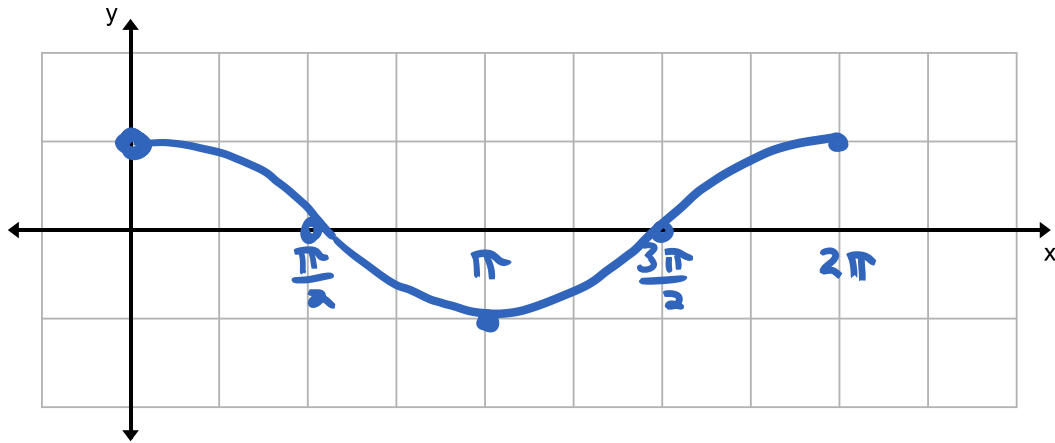
$2\pi \div \frac{1}{2}$

$2\pi \cdot \frac{2}{1} = 4\pi$

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

Period: 2π

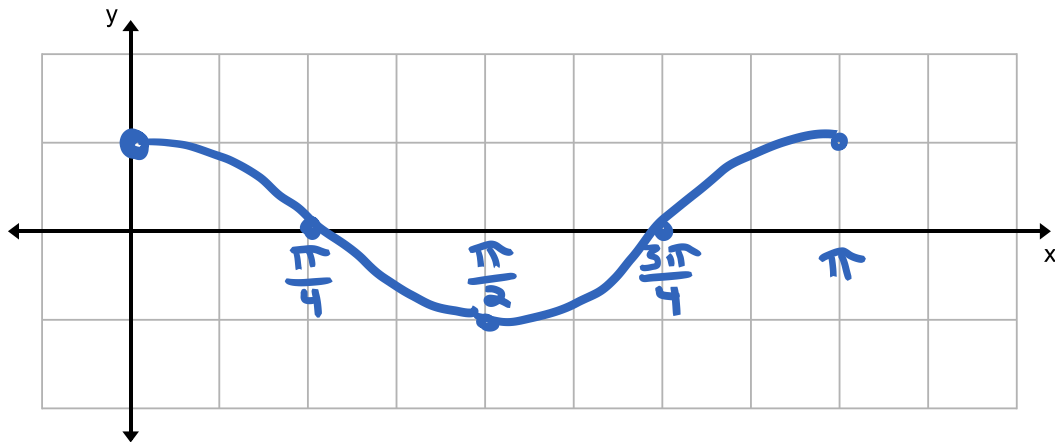
$$\frac{2\pi}{1} = \frac{2\pi}{1}$$



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

Period: π

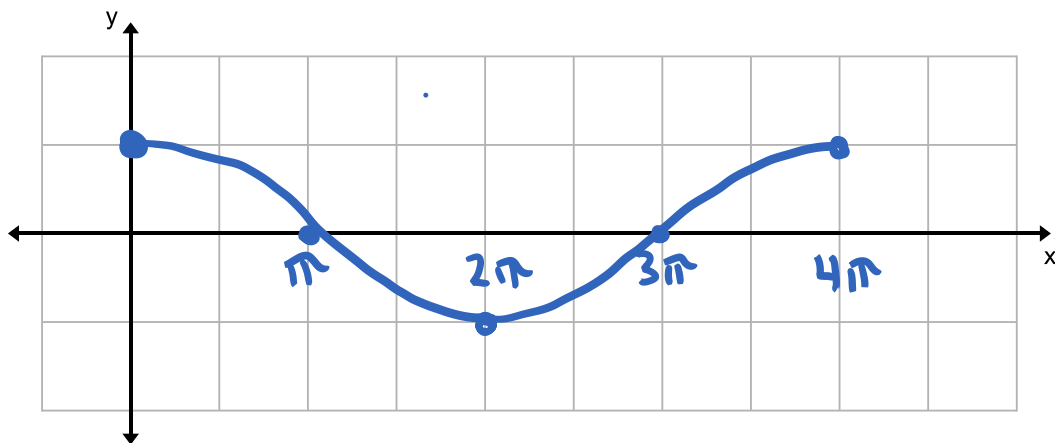
$$\frac{2\pi}{2} = \pi$$



c. Graph one cycle of $y = \cos \frac{1}{2}x$

Period: 4π

$$\frac{2\pi}{1/2} = 2\pi \cdot 2 = 4\pi$$

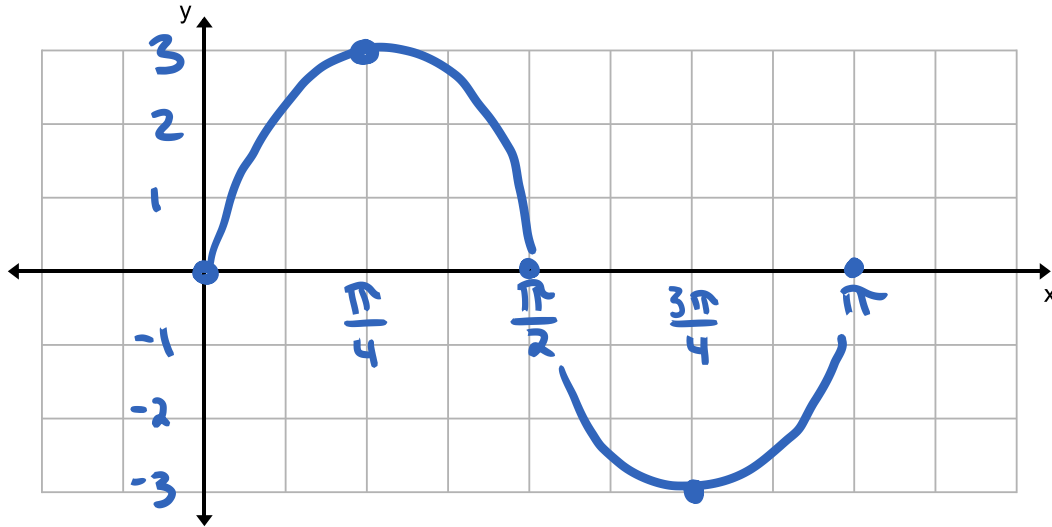


$$\frac{2\pi}{b} = \frac{2\pi}{2} = \boxed{\pi}$$

Homework

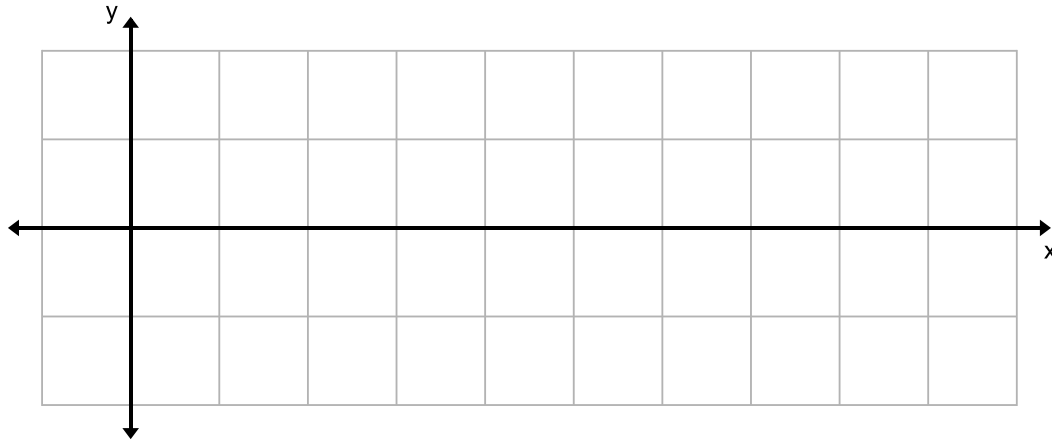
1.) Graph one cycle of $y = 3 \sin 2x$

Period: π



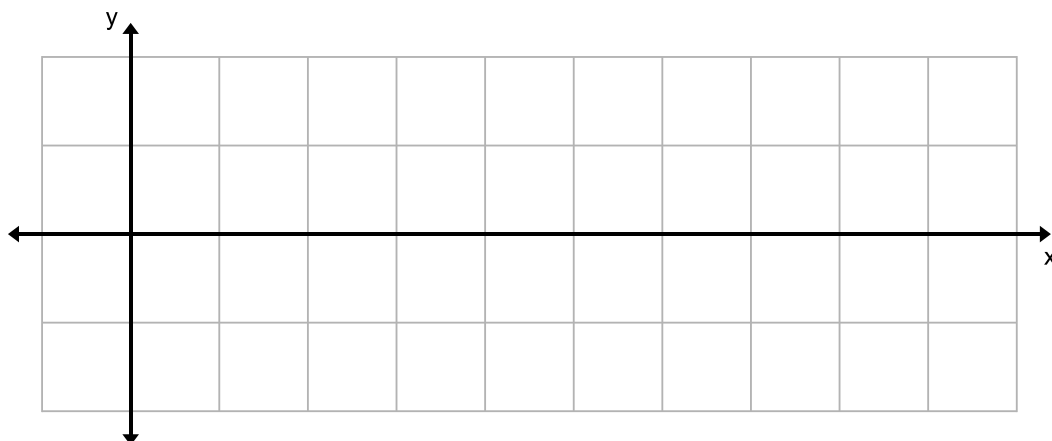
2.) Graph one cycle of $y = -\frac{1}{2} \cos x$

Period: _____



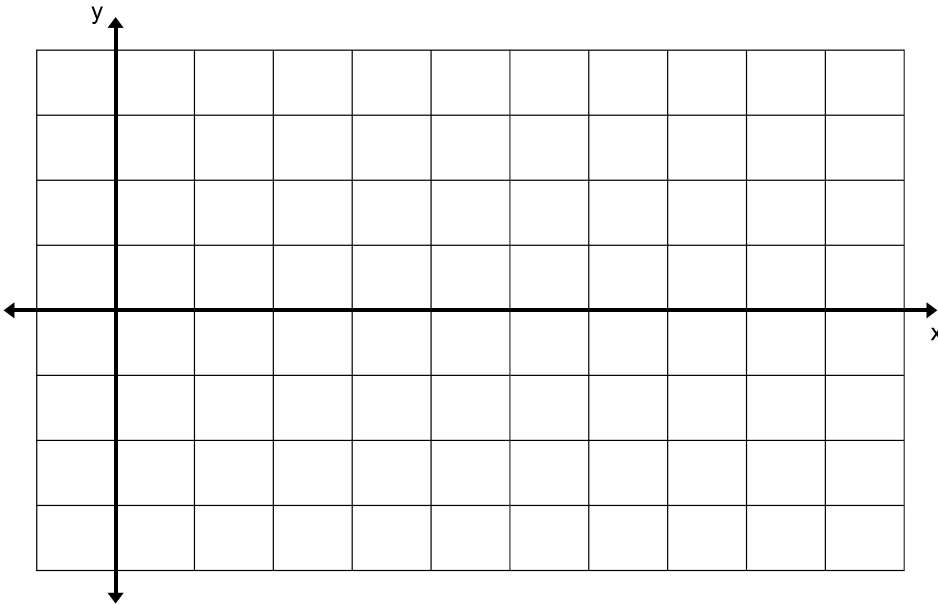
3.) Graph one cycle of $y = 2 \sin \frac{1}{2}x$

Period: _____



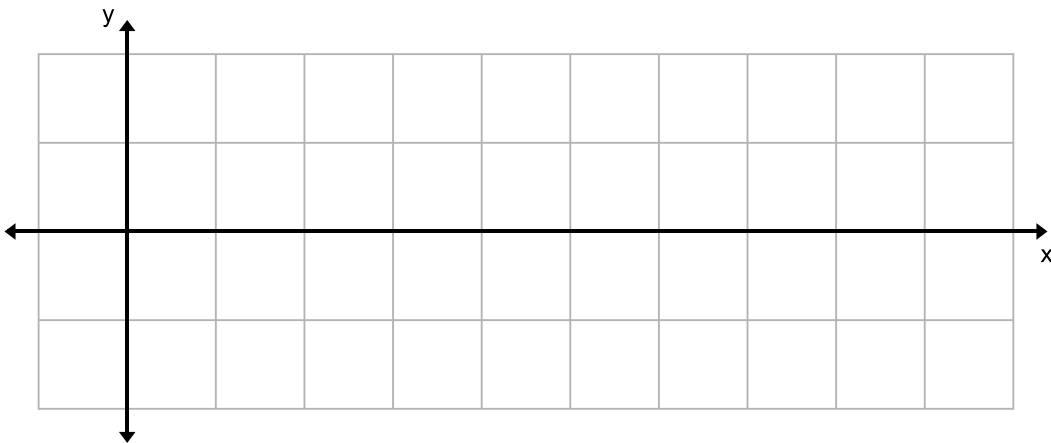
4.) Graph one cycle of $y = -4 \cos 2x$

Period: _____



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

Period: _____



6.) Graph one cycle of $y = 3 \cos \frac{1}{2}x$

Period: _____

