

Identify the amplitude and period for the following equations, find the domain and range, then graph the trig function.

1.) $y = \cos \frac{3}{4}x$

Amplitude: 1

Period: $\frac{2\pi}{3/4} = \frac{8\pi}{3}$

Domian: $(-\infty, \infty)$

Range: $[-1, 1]$

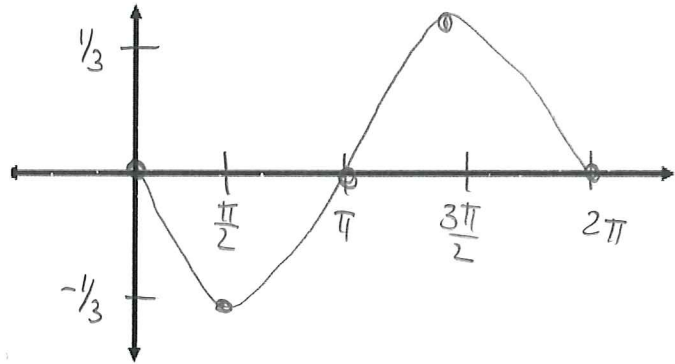
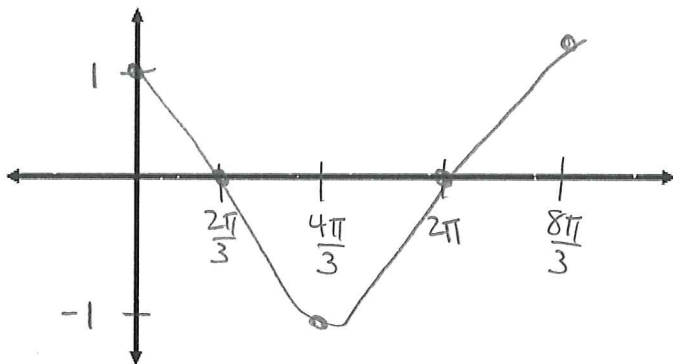
2.) $y = -\frac{1}{3}\sin x$

Amplitude: $\frac{1}{3}$

Period: 2π

Domian: $(-\infty, \infty)$

Range: $[-\frac{1}{3}, \frac{1}{3}]$



3.) $y = 5\cos x$

Amplitude: 5 *

Period: 2π

Domian: $(-\infty, \infty)$

Range: $[-5, 5]$

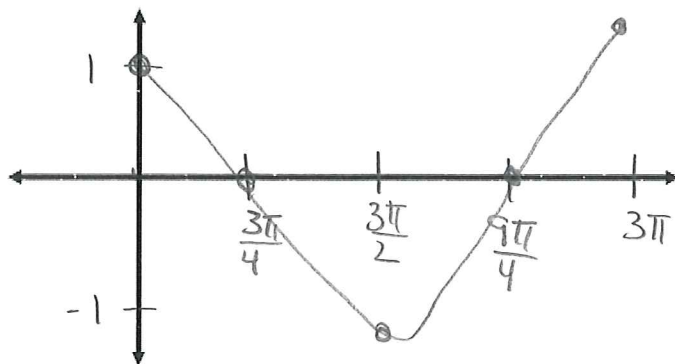
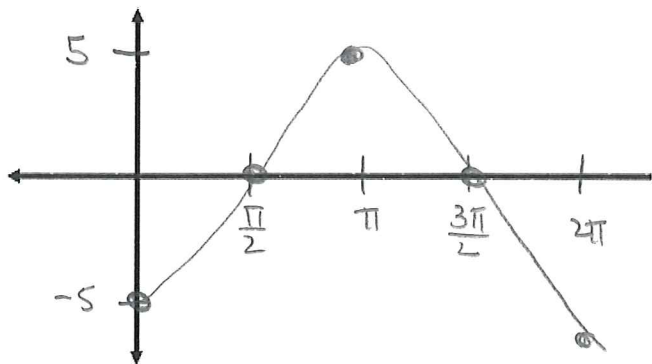
4.) $y = \cos \frac{2}{3}x$

Amplitude: 1

Period: $\frac{2\pi}{2/3} = 3\pi$

Domian: $(-\infty, \infty)$

Range: $[-1, 1]$



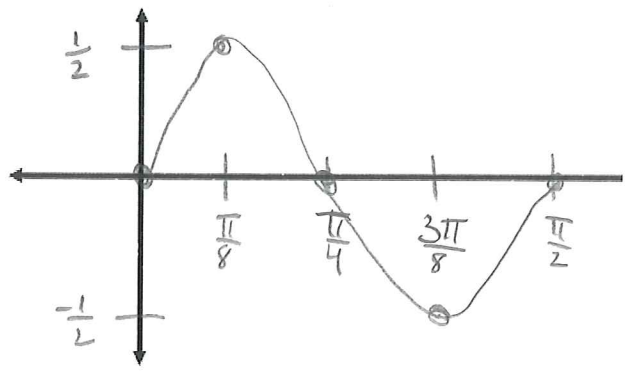
5.) $y = \frac{1}{2} \sin 4x$

Amplitude: $\frac{1}{2}$

Period: $\frac{2\pi}{4} = \frac{\pi}{2}$

Domian: $(-\infty, \infty)$

Range: $[-\frac{1}{2}, \frac{1}{2}]$



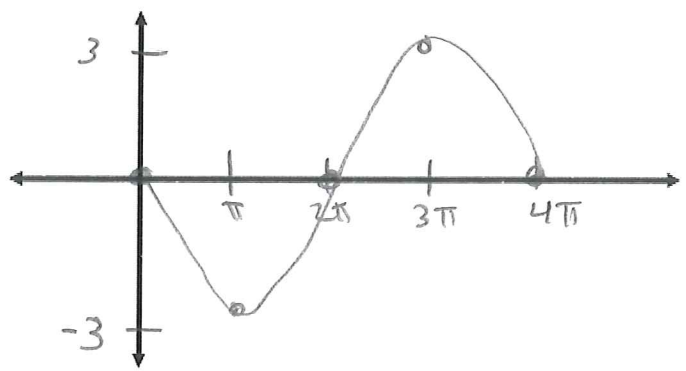
6.) $y = -3 \sin \frac{1}{2}x$

Amplitude: 3

Period: $\frac{2\pi}{1/2} = 4\pi$

Domian: $(-\infty, \infty)$

Range: $[-3, 3]$



7.) Compare the graphs $y = 3\cos x$ and $y = -3\cos x$. Give one similarity and one difference.

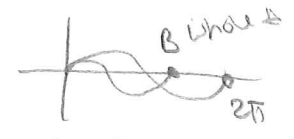
Similar: period is 2π
Amplitude is 3

Difference: flipped (reflected)

8.) What effect does "B" have on the period if it is a whole number?

$\frac{2\pi}{B}$
B = whole #

makes it complete one cycle (period) faster

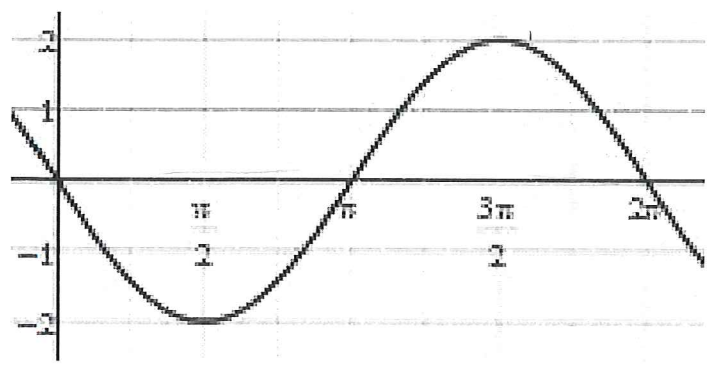


9.) What effect does "B" have on the period if it is a fraction?

makes it complete one cycle (period) slower



10.) Use the graph below to answer the following questions.



a.) What is the amplitude?

2 $\neq (-2)$

b.) What is the period?

2π

c.) What is the equation for the graph?

$y = -2 \sin x$