

## Precalculus

**Generate a formula from sine/cosine graph,  
amplitude and period modified**

Todor Milev

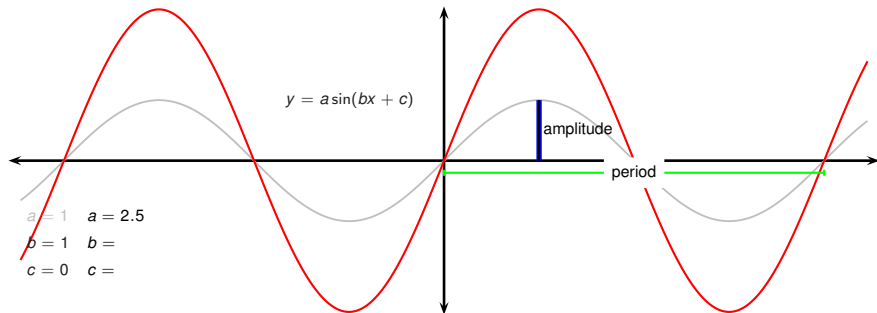
2019

- The graph of  $a \sin(bx + c)$  is referred to as a “wave”.

### Definition (Phase, period, frequency, amplitude of a wave)

In the function  $a \sin(bx + c)$ , the number  $|a|$  is called the *amplitude* of the wave, the number  $\frac{b}{2\pi}$  is called the *frequency* of the wave, the number  $\frac{2\pi}{b}$  is called the *period* of the wave, the number  $c$  is called the *phase* of the wave.

- What happens when we change the amplitude? The frequency/period? The phase?

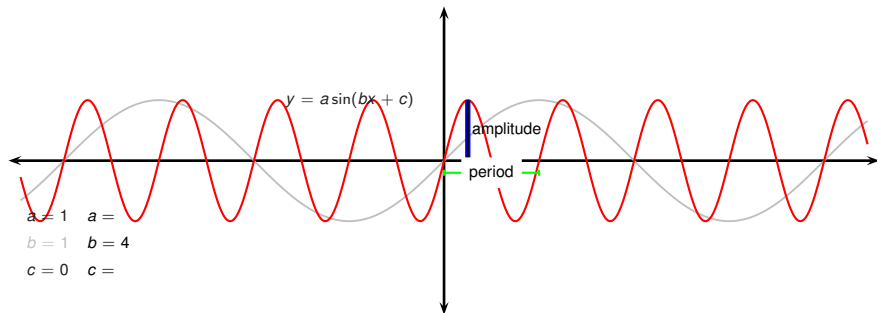


- The graph of  $a\sin(bx + c)$  is referred to as a “wave”.

### Definition (Phase, period, frequency, amplitude of a wave)

In the function  $a\sin(bx + c)$ , the number  $|a|$  is called the *amplitude* of the wave, the number  $\frac{b}{2\pi}$  is called the *frequency* of the wave, the number  $\frac{2\pi}{b}$  is called the *period* of the wave, the number  $c$  is called the *phase* of the wave.

- What happens when we change the amplitude? The frequency/period? The phase?



- The graph of  $a \sin(bx + c)$  is referred to as a “wave”.

## Definition (Phase, period, frequency, amplitude of a wave)

In the function  $a \sin(bx + c)$ , the number  $|a|$  is called the *amplitude* of the wave, the number  $\frac{b}{2\pi}$  is called the *frequency* of the wave, the number  $\frac{2\pi}{b}$  is called the *period* of the wave, the number  $c$  is called the *phase* of the wave.

- What happens when we change the amplitude? The frequency/period? The phase?

