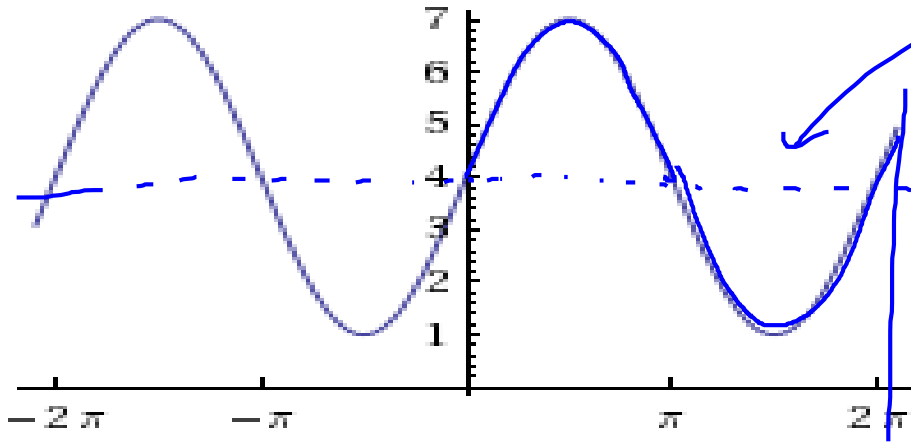# Wednesday, April 3, 2019

$y = 4 + 3\sin x$

$y = 3\sin 1x + 4$

- Warm-up
  - Name the **function**, **vertical shift**, **amplitude** and **frequency** of the given graph:

midline

- Practice trig functions by hand

- Match Mine

function = $\sin$

vertical shift = $+4$

amplitude = 3

frequency = $1 \Big/ 2\pi$

how many cycles in 2π

Objectives

Content: I will <u>understand</u> the shape and critical features of **sine** and **cosine waves**.
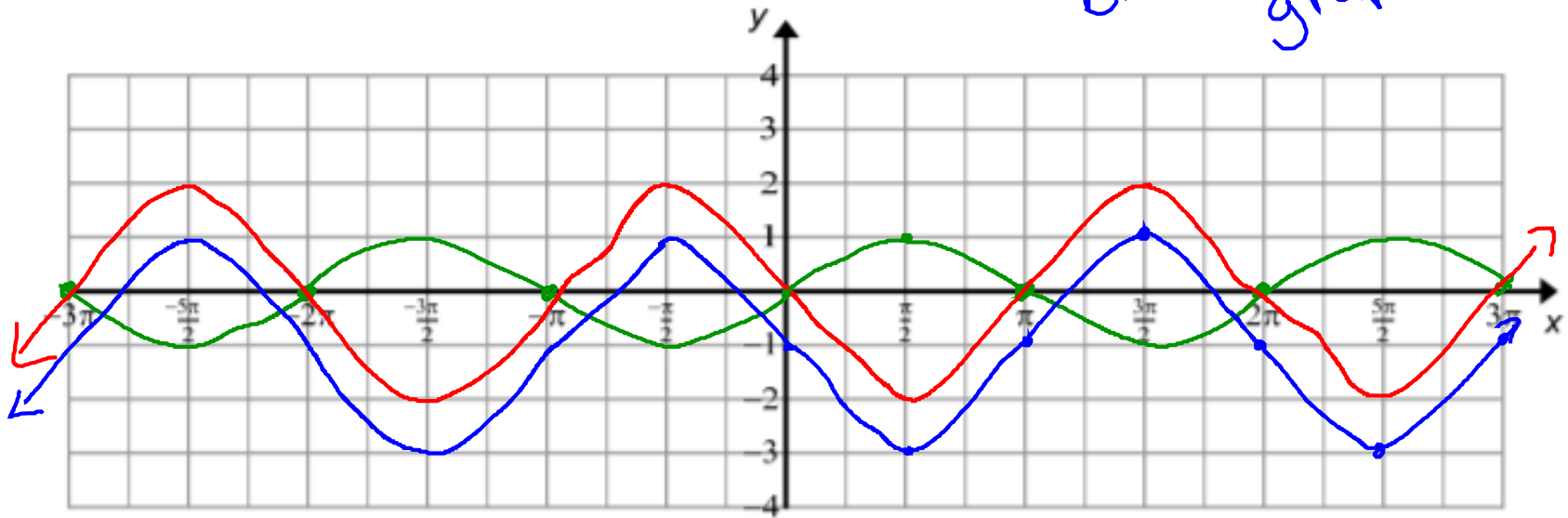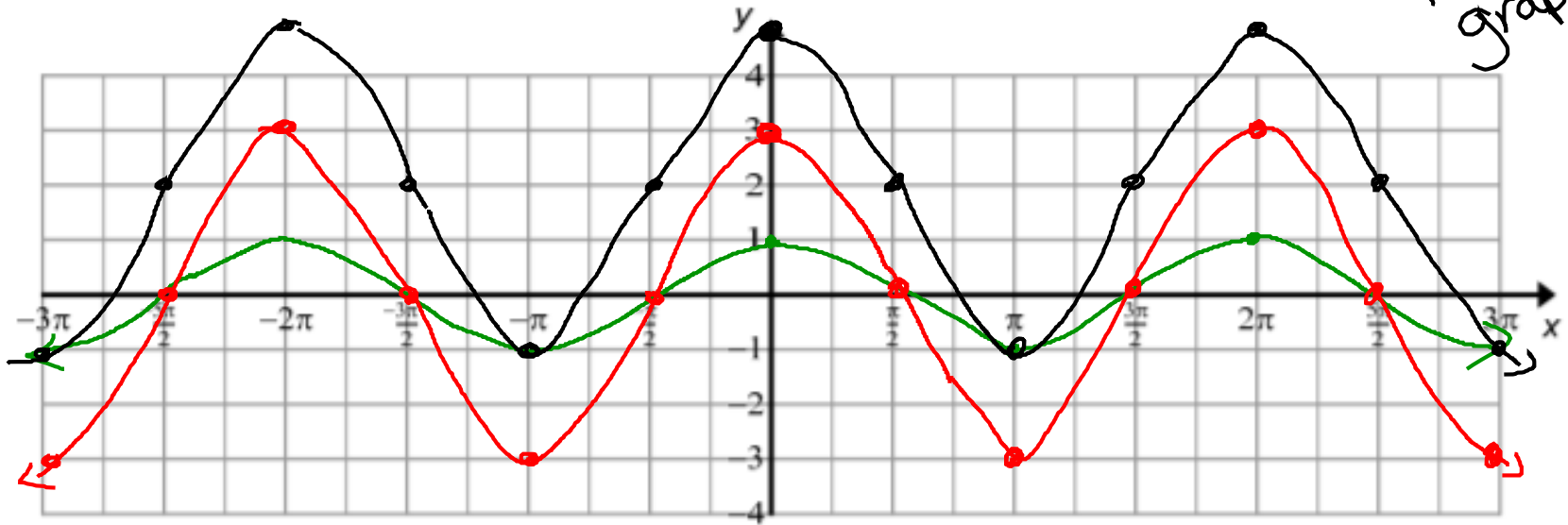**Social**: I will <u>listen</u> well and <u>discuss</u> my uncertainties with my group members.
Language: I will clearly <u>compare and contrast</u> the critical features of **sine** and **cosine waves** as well as <u>apply</u> **amplitude, vertical & horizontal shift, frequency & period**.

Sketching Graphs

- $y = -2\sin x - 1$

blue = final graph

Sketching Graphs

black = final graph

• $y = 3cosx + 2$

Sketching Graphs

frequency $2/2\pi$

period = π

- $y = \cos 2x - 3$

Sketching Graphs

- *function: sine*
- *amplitude: 2*
- *vertical shift: 1*
- *frequency: 1/2*

$$1^{st}: \quad y = 2\sin \frac{1}{2}x + 1$$

Objectives

Content: I will <u>understand</u> the shape and critical features of **sine** and **cosine waves**.

Social: I will <u>listen</u> well and <u>discuss</u> my uncertainties with my group members.
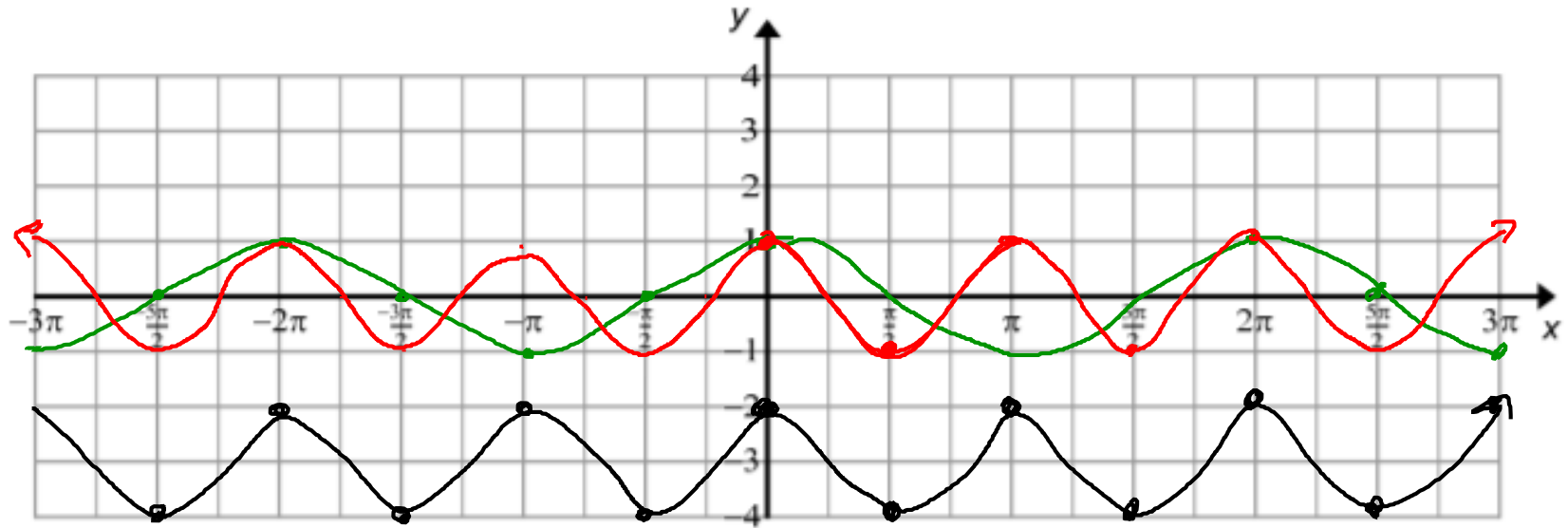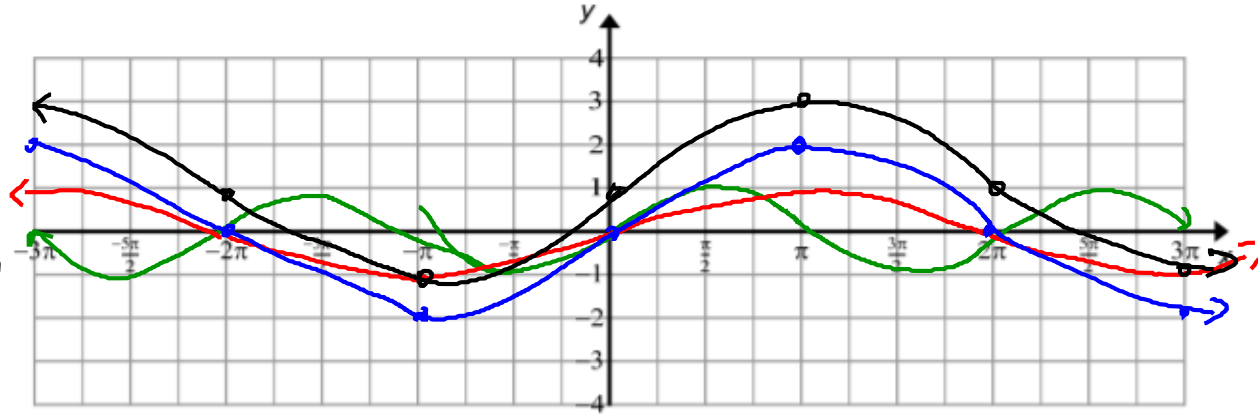
Language: I will clearly <u>compare and contrast</u> the critical features of **sine** and **cosine waves** as well as <u>apply</u> **amplitude, vertical & horizontal shift, frequency & period**.
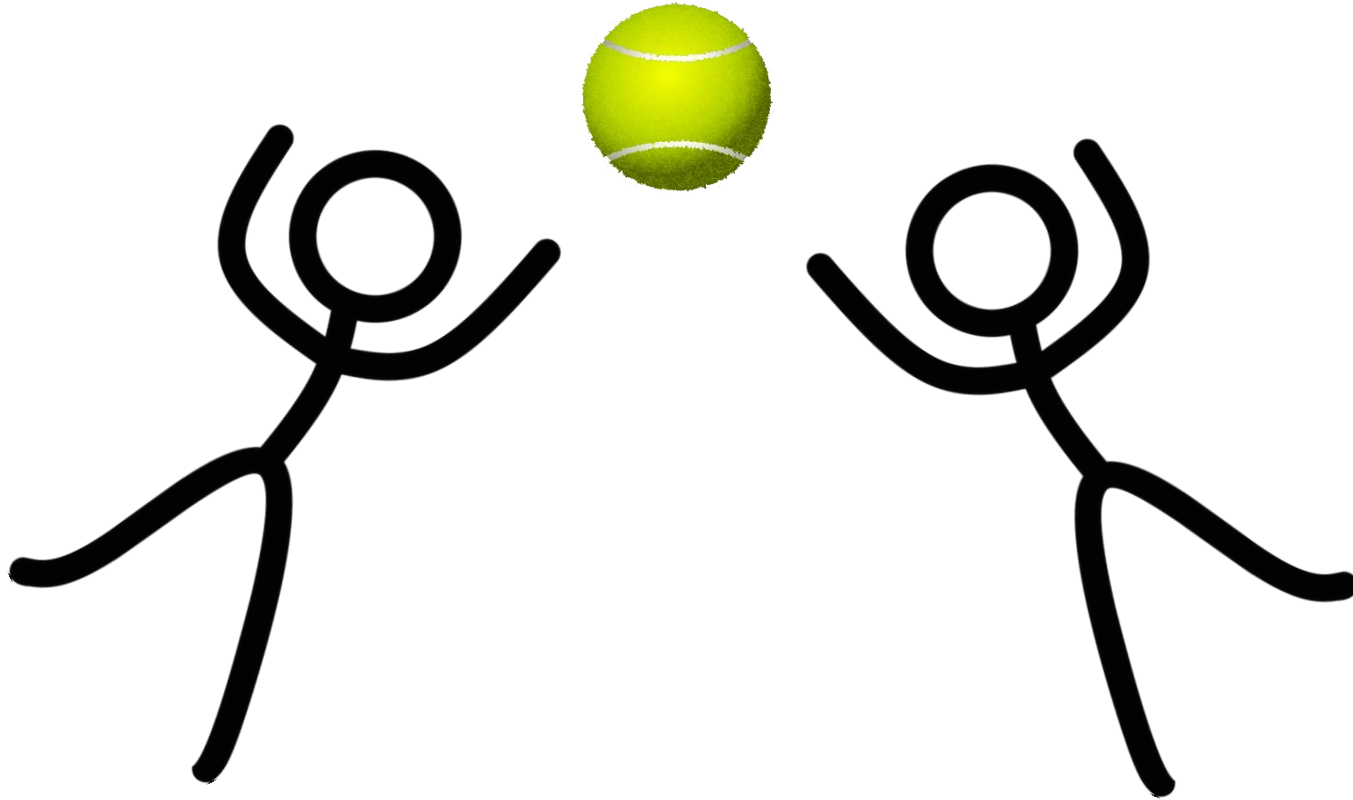
Brain Break

Objectives
Content: I will <u>understand</u> the shape and critical features of **sine** and **cosine waves**.
Social: I will <u>listen</u> well and <u>discuss</u> my uncertainties with my group members.
Language: I will clearly <u>compare and contrast</u> the critical features of **sine** and **cosine waves** as well as <u>apply</u> **amplitude, vertical & horizontal shift, frequency & period**.

Match Mine
graphing

write an equation
- Sin or cos
- vertical shift
- amplitude?
- frequency = 1

Objectives

Content: I will <u>understand</u> the shape and critical features of **sine** and **cosine waves**.

Social: I will <u>listen</u> well and <u>discuss</u> my uncertainties with my group members.
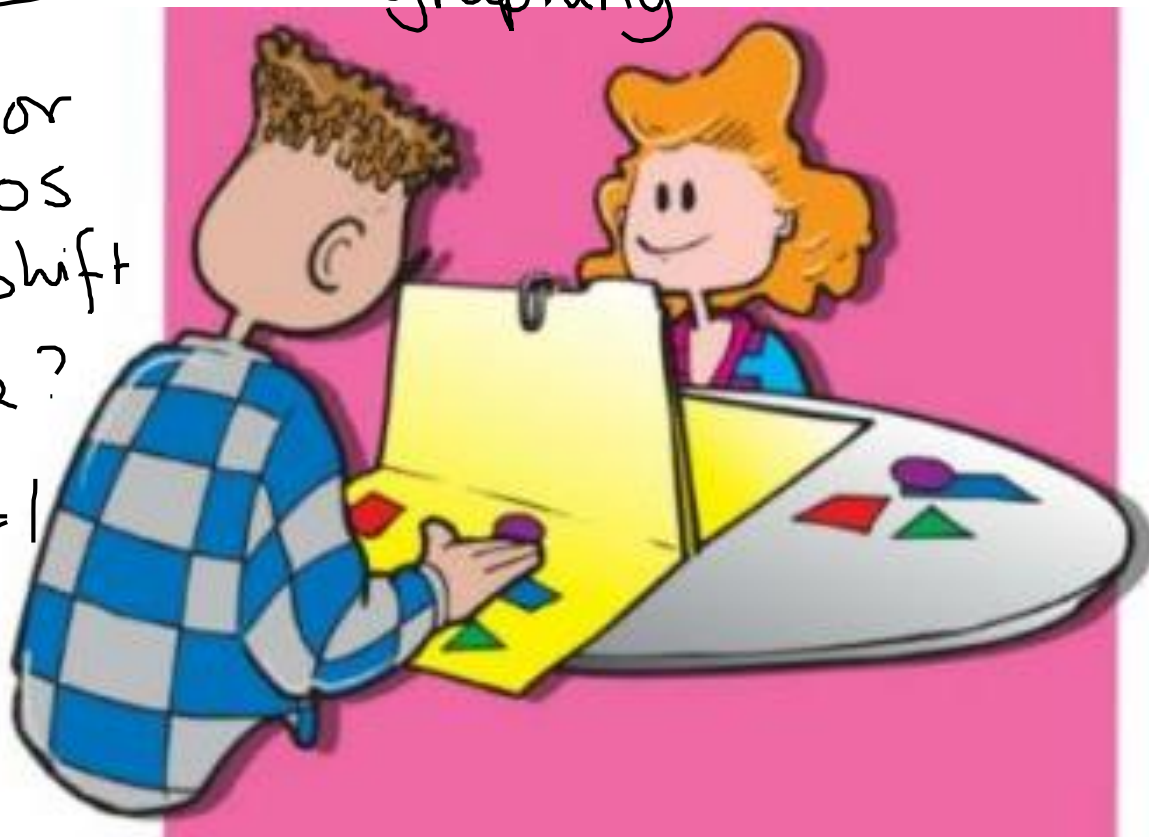
Language: I will clearly <u>compare and contrast</u> the critical features of **sine** and **cosine waves** as well as <u>apply</u> **amplitude, vertical & horizontal shift, frequency & period**.