

3.1 Evaluating Sinusoids

You need a graphing calculator today!!

Warm Up Monday

checked for accuracy
when WU's turned in

$$\sin \frac{\pi}{4}$$

$$\csc 90^\circ$$

About Me

1. What's your favorite radio station (streaming or actual radio)
2. What's your favorite song from the last year?

3.1 Evaluating Sihusoids

EQ: How do I use my graphing calculator to find x & y values on a sihusoid?

For each of the following functions use your graphing calculator to:

- Find $f(x)$ for the given value of x
- Find the first three positive values of x for the given value of $f(x)$

Round to three decimal places.

$$f(x) = y$$

$$1. f(x) = 2 + 3 \cos \frac{\pi}{9}(x - 6)$$

$$a.) \text{ Find } f(8) = 2 + 3 \cos \frac{\pi}{9}(8 - 6)$$

$$x=8 \quad f(x)=y$$

$$4.298$$

first 3
positive
values

$$b.) f(x) = 1.3$$

$$y=1.3$$

$$1.3 = 2 + 3 \cos \frac{\pi}{9}(x - 6)$$

Set window

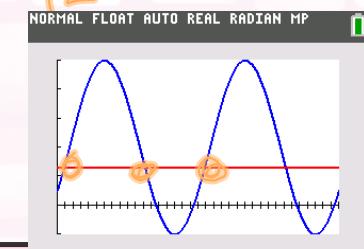
$$Y_2 = 1.3$$

NORMAL FLOAT AUTO REAL RADIAN MP
DISTANCE BETWEEN TICK MARKS ON AXIS

WINDOW
Xmin=0
Xmax=36
Xscl=1
Ymin=-1
Ymax=5
Yscl=1
Xres=1
$\Delta x=0.136363636364$
TraceStep=0.272727272727...

NORMAL FLOAT AUTO REAL RADIAN MP

sin($\pi/4$)	0.7071067812
$2+3\cos(\frac{\pi}{9}(8-6))$	4.298133329
$2+3\cos((\pi/9)(8-6))$	4.298133329



2nd TRACE
5: intersect
enter 3 times

0.825
11.175
18.825

3.1 Evaluating Sineusoids

EQ: How do I use my graphing calculator to find x & y values on a sineusoid?

For each of the following functions use your graphing calculator to:

- Find $f(x)$ for the given value of x
- Find the first three positive values of x for the given value of $f(x)$
Round to three decimal places.

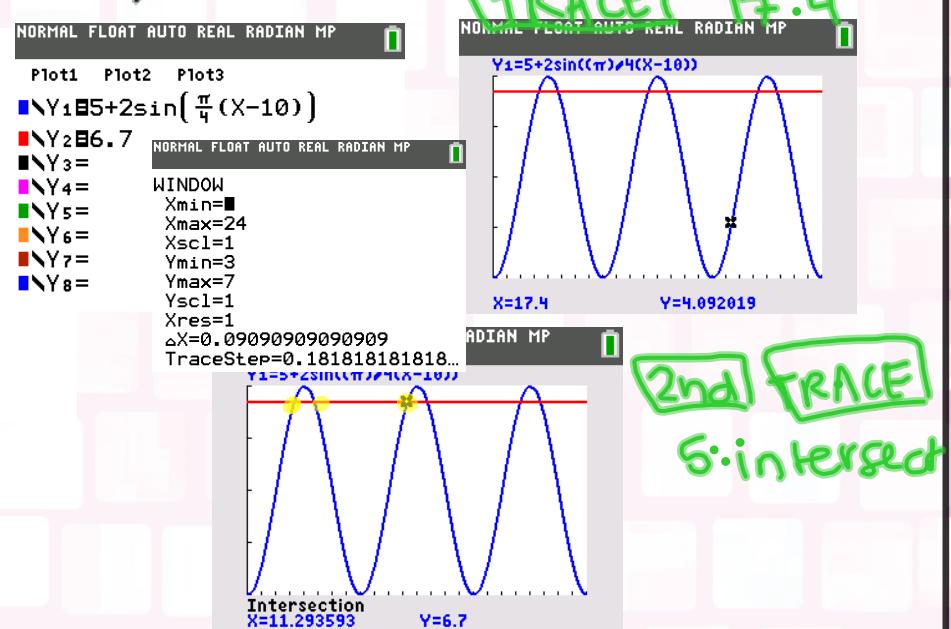
2. $f(x) = 5 + 2 \sin \frac{\pi}{4}(x - 10)$

a. Find $f(17.4)$

4.092

b. $f(x) = 6.7$

3.294,
4.706,
11.294



3.1 Evaluating Sihusoids

EQ: How do I use my graphihg calculator
to fihd x & y values oh a sihusoid?

For each of the following functions use your graphing calculator to:

- a.) Find $f(x)$ for the given value of x
- b.) Find the first three positive values of x for the given value of $f(x)$
Round to three decimal places.

$$3. \quad f(x) = -2 + 5 \cos \frac{\pi}{11}(x + 13)$$

a.) Find $f(8)$

b.) $f(x) = -4$

3.1 Evaluation of Sinusoidal Functions

Name: _____

For each of the following functions use your graphing calculator to:

- a.) Find $f(x)$ for the given value of x
- b.) Find the first three positive values of x for the given value of $f(x)$
Round to three decimal places.

1. $f(x) = 2 + 5 \cos \frac{\pi}{10}(x - 3)$

- a.) Find $f(8.3)$
- b.) $f(x) = 5$

2. $y = 4 + 3 \sin \frac{\pi}{6}(x - 2)$

- a.) Find $f(12.7)$
- b.) $f(x) = 6$

3. $y = -2 + 4 \sin \frac{\pi}{2}(x - 0.3)$

- a.) Find $f(2.8)$
- b.) $f(x) = 0$

4. $y = -1 + 3 \cos \frac{\pi}{3}(x + 5.2)$

- a.) Find $f(5)$
- b.) $f(x) = 1$

5. $y = 3 + 5 \sin \frac{\pi}{9}(x - 11)$

- a.) Find $f(7)$
- b.) $f(x) = 2$

6. $y = 1 + 6 \cos \frac{\pi}{13}(x - 20)$

- a.) Find $f(4.3)$
- b.) $f(x) = -4.5$

7. $y = 5 + 4 \sin \frac{\pi}{12}(x + 10)$

- a.) Find $f(1)$
- b.) $f(x) = 2.5$

8. $y = 1 + 3 \cos \frac{\pi}{8}(x + 7)$

- a.) Find $f(13)$
- b.) $f(x) = -1$

3.1 Evaluating Sinusoids

If you will not be here tomorrow for any reason...

You must watch the Ferris Wheel problem notes.

They are due at the beginning of class on Wednesday. Please take a notes sheet & 3.2 homework!

<https://youtu.be/woRxxKoxqCI>



3.1 Evaluating Sihuroids

Closing

Go to google classroom and
complete the google form!

You may use the closing box if you need
space to work, but you WILL ONLY get a
grade on your google form submission.

3.1 Evaluating Sinusoids

Closing

For each of the following functions use your graphing calculator to:

- a.) Find $f(x)$ for the given value of x
- b.) Find the first three positive values of x for the given value of $f(x)$
Round to three decimal places.

$$1. \quad f(x) = 2 + 5 \cos \frac{\pi}{10}(x - 3)$$

$$\text{a.) Find } f(8.3)$$

$$\text{b.) } f(x) = 5$$