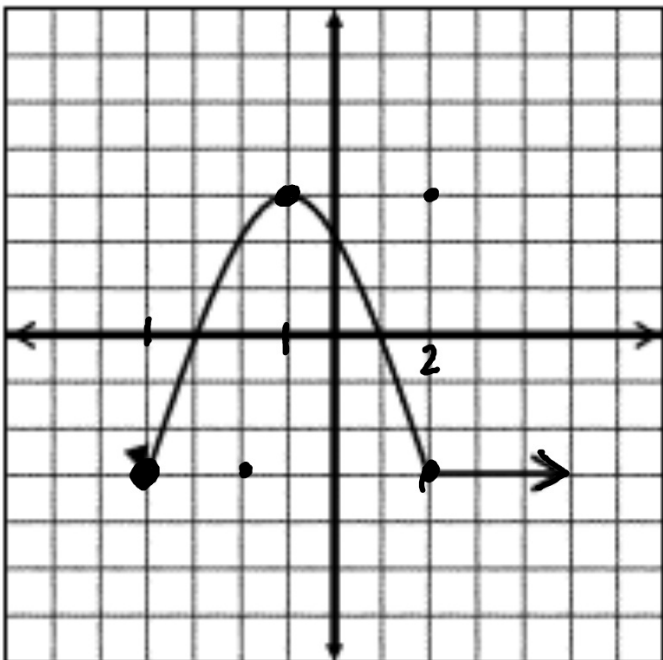


# Warm Up

Answer the following about this graph:



Domain:  $[-4, \infty)$

Range:  $[-3, 3]$

Maximum: 3

Minimum: -3

Increasing Interval:  $(-4, -1)$

Decreasing Interval:  $(-1, 2)$

Constant Interval:  $(2, \infty)$

Even/Odd/Neither? Neither

$f(2) = ?$   $[-3]$

# Letter to a Future Student

- Greeting - Dear \_\_\_\_\_,
- 1st paragraph - about precalc class
- 2nd paragraph - about ms. grosse
- 3rd paragraph - advice for ways to be successful
- Closing - Sincerely/From/closing  
YOUR NAME

## **NCFE Reminder**

- 34-37 questions (all MC)
- Calculator active!
- Formula sheet
- All online - 1 question at a time
- Don't leave any questions blank.
- Eliminate obviously wrong answers if you get stuck.

## Vocabulary Quizizz

- Log on to Quizizz
- Complete the challenge!

# NCFE Review Work Time

10 minutes to prep

- Go through questions you have not done yet
- Check solution station online

19).

$$x = \frac{1}{3}\sqrt{t} + 3$$

$$y = 4t^2 - 7$$

$$x = \frac{1}{3}\sqrt{t} + 3 \rightarrow y = 4(9(x-3)^2)^2 - 7$$

$$x - 3 = \frac{1}{3}\sqrt{t}$$

$$y = 4(81(x-3)^4) - 7$$

$$3(x-3) = \sqrt{t}$$

$$y = 324(x-3)^4 - 7$$

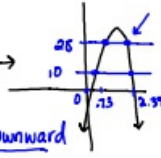
$$(3(x-3))^2 = t$$

$$9(x-3)^2 = t$$

D.

## Questions 1-25 Review

6, 19, 2, 12, 10, 3,

2).  $h(t) = -16t^2 + 50t \rightarrow$  

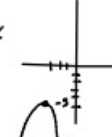
$h(t) = 28$

A. 2.39 sec. = 28 downward

B. 0.73 sec. = 28

3). **Range**  $f(x) = -5 - 2(x+3)^2$

min  $\rightarrow$  max

$(-\infty, -5]$   Domain:  $(-\infty, \infty)$

b).  $P+Q=5$  and  $\frac{1}{P} + \frac{1}{Q} = 8$

$P=5-Q$

$\frac{Q}{Q} \cdot \frac{1}{(5-Q)} + \frac{1}{Q} = 8 \cdot \frac{(Q)5}{(Q)5}$

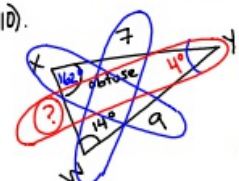
$Q + 1(5-Q) = 8(Q)(5-Q)$

$Q + 5 - Q = 8Q(5-Q)$

$5 = 40Q - 8Q^2$

$+8Q^2 - 40Q + 5 = 0$

$8x^2 - 40x + 5$  [A]

10).  Law of Sines

$\frac{\sin(14)}{7} = \frac{\sin(\theta)}{9}$

$9 \sin(14) = 7 \sin(\theta)$

$\frac{9 \sin(14)}{7} = \sin(\theta)$

$\sin^{-1}\left(\frac{9 \sin(14)}{7}\right) = \theta$

$162^\circ \leftarrow 18^\circ = \theta$

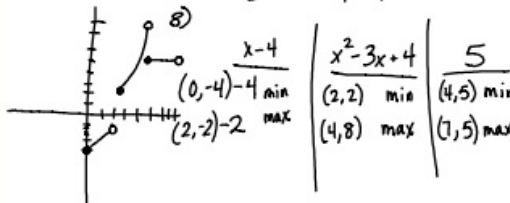
$\frac{\sin(4)}{x} = \frac{\sin(14)}{7}$

$7 \sin(4) = x \sin(14)$

$\frac{7 \sin(4)}{\sin(14)} = x$

$2.018 = x$   
 $2.02$

12).  $f(x) = \begin{cases} x-4 & 0 \leq x < 2 \\ x^2-3x+4 & 2 \leq x < 4 \\ 5 & 4 \leq x < 7 \end{cases}$



$\frac{x-4}{(0, -4) \rightarrow 4 \text{ min}}$   $\frac{x^2-3x+4}{(2, 2) \text{ min} \quad (4, 8) \text{ max}}$   $\frac{5}{(4, 5) \text{ min} \quad (7, 5) \text{ max}}$





## Questions 26-50 Review

$$\text{Polar} \rightarrow (\theta, r) \quad \begin{aligned} x^2 + y^2 &= r^2 \\ \tan^{-1}(y/x) &= \theta \end{aligned}$$

$$\text{Rectangular} \rightarrow (x, y) \quad \begin{aligned} x &= r \cos \theta \\ y &= r \sin \theta \end{aligned}$$

ID's

$$\sin \theta \quad \cos \theta \quad \tan \theta = \frac{\sin \theta}{\cos \theta}$$

$$\csc \theta = \frac{1}{\sin \theta} \quad \sec \theta = \frac{1}{\cos \theta} \quad \cot \theta = \frac{\cos \theta}{\sin \theta}$$



$$\csc^2 \theta - \cot^2 \theta = ? \quad 30^\circ$$

$$\csc^2(30) - \cot^2(30) = \square \quad \begin{aligned} &\frac{1}{\sin^2(30)} \\ &\left(\frac{1}{\sin(30)}\right)^2 \end{aligned}$$