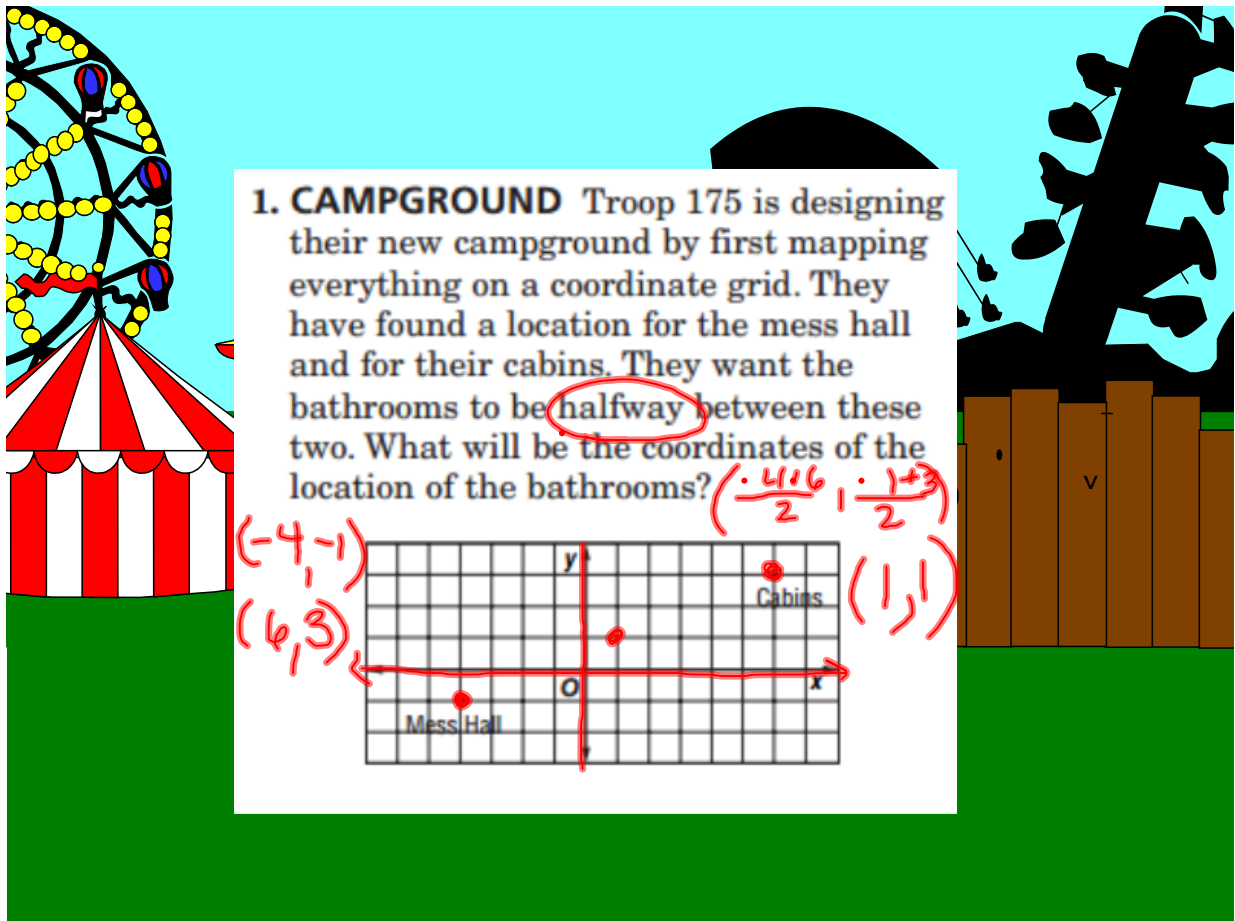


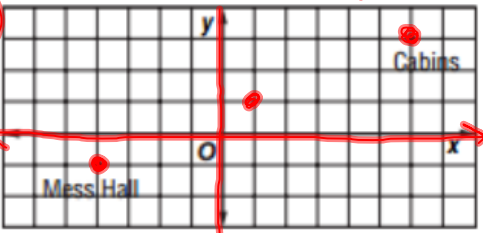
Welcome! Please grab your ISN and complete your WARM UP in the Google classroom!!

Sep 12-8:56 AM



1. CAMPGROUND Troop 175 is designing their new campground by first mapping everything on a coordinate grid. They have found a location for the mess hall and for their cabins. They want the bathrooms to be halfway between these two. What will be the coordinates of the location of the bathrooms?

$(-4, -1)$ $(6, 3)$ $(\frac{-4+6}{2}, \frac{-1+3}{2})$ $(1, 1)$



Fair grounds

WWK pg 19

- slope - $\frac{\text{rise}}{\text{run}}$ - rate of change
for an equation or Line

$$\frac{y_2 - y_1}{x_2 - x_1}$$

Sep 4-8:04 AM



Fair grounds

SLOPE pg 24



Fair grounds

SLOPE pg 24

What is SLOPE?

Slope describes the rate of change of a line.

$\frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$

From a Table

1. Find the intercepts of the x and y values (zeros)

2. Write the slope as $-\frac{y}{x}$

| X | Y |
|----|---|
| -3 | 6 |
| -2 | 5 |
| -1 | 4 |
| 0 | 3 |
| 1 | 2 |
| 2 | 1 |
| 3 | 0 |

| X | Y |
|----|----|
| -3 | -2 |
| -2 | 0 |
| -1 | 2 |
| 0 | 4 |
| 1 | 6 |
| 2 | 8 |
| 3 | 10 |

$-\frac{4}{2} = -2$

$\frac{4}{2} = 2$

$(-1) = \frac{-3}{3}$

SLOPE pg 24

From a Graph

1. Choose two points on the line
2. Count the rise then the run
3. Write the slope as $\frac{\text{rise}}{\text{run}}$

Is **SLOPE?**
describes the _____ of a line.

1. Solve the equation for y
2. Slope is the rate of change therefore, it is next to the variable x.
3. The slope is the m of x.

$$y = mx + b$$

$$y = 2x + 4 \quad \text{or} \quad 6x - 3y = 12$$

$$-6x \quad \downarrow \quad | -6|$$

$$-3y = -6x + 11$$

$$\frac{-3y}{-3} = \frac{-6x + 11}{-3}$$

$$y = 2x - 4$$

$m = 2$

From an Equation

Sep 9-9:25 AM

SLOPE pg 24

1. Label the x and y coordinates.
2. Find the change of y and the change of x by subtraction
3. Write the slope as the change of y over the change of x.

$$\frac{y_2 - y_1}{x_2 - x_1}$$

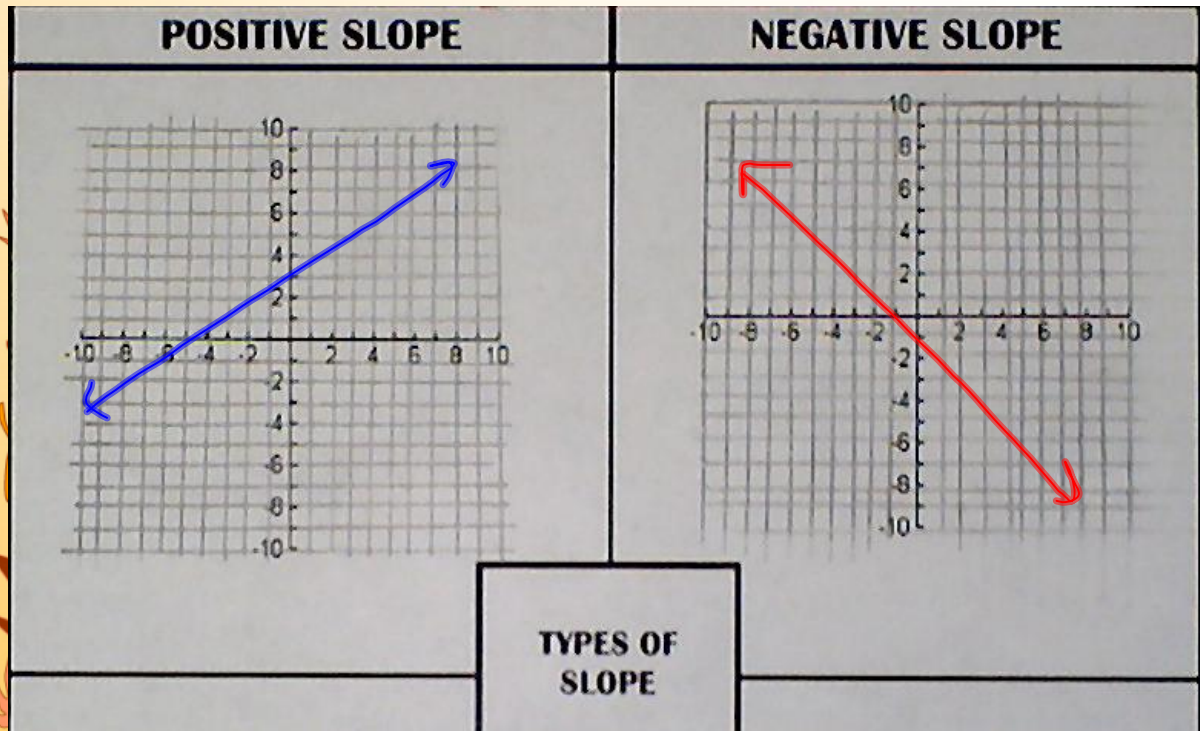
$$\begin{matrix} (-1, 4) & \text{or} & (6, -7) \\ x_1 & y_1 & x_2 & y_2 \end{matrix}$$

$$\frac{-7 - 4}{6 - (-1)} = \frac{-11}{7}$$

From Two Points

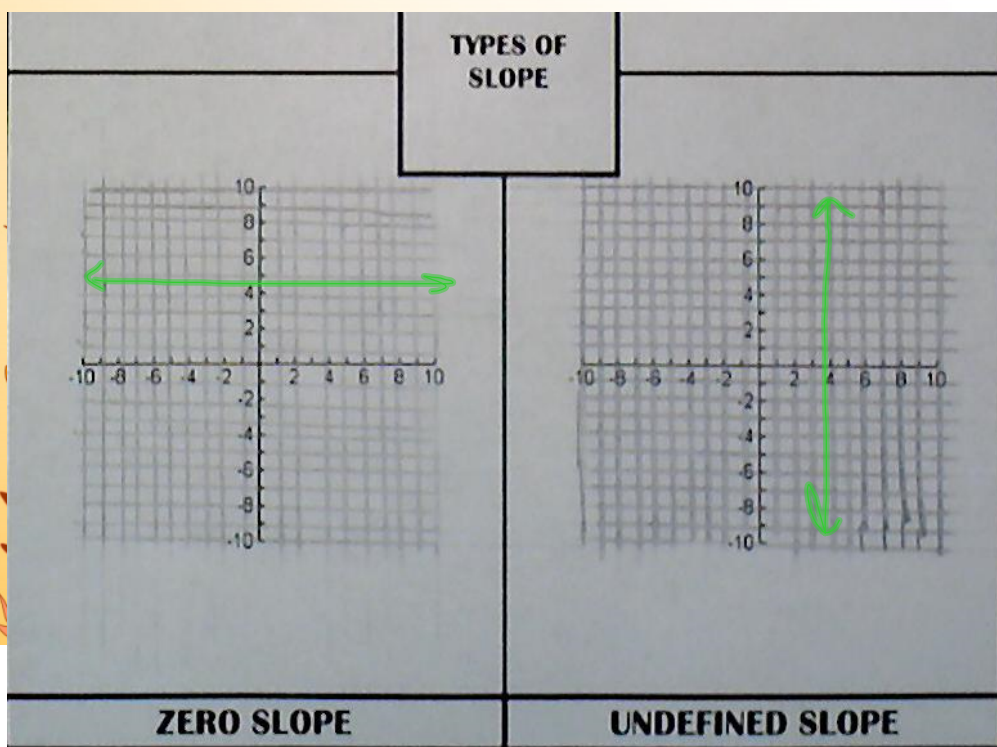
Sep 9-9:25 AM

SLOPE pg 24



Sep 9-9:25 AM

SLOPE pg 24



Sep 9-9:25 AM

Ex 1 (pg 23)

a) What is the slope between (2,4) and (6,6)?

$$\frac{6-4}{6-2} = \frac{2}{4} = \boxed{\frac{1}{2}}$$

$$\frac{(y_2 - y_1)}{(x_2 - x_1)}$$

b) Between (-4,-3) and (0,7)?

x_1, y_1 x_2, y_2

$$\frac{7+3}{0+4} = \frac{10}{4} = \boxed{\frac{5}{2}}$$

Sep 4-8:13 AM

Ex 2 (pg 23)

Find the slope of the following lines...

a) $y = 7x + 3$

$m = 7$

b) $y = -1/2x$

$m = -1/2$

c) $y = -4$

$m = 0$

d) $8x - 2y = 16$

e) $y = 14 - 4/3x$

$m = -4/3$

$y = mx + b$
↑
slope

$$\begin{array}{r|l} 8x - 2y = 16 & \\ \hline -8x & -5x \\ \hline -2y & 16 - 8x \\ \hline -2 & -2 \quad -2 \end{array}$$

$y = -8 + 4x$
 $m = 4$

Sep 4-8:13 AM

Homework

Find the slope of the line that passes through each pair of points.

1. (6, 3), (7, -4)

2. (-9, -3), (-7, -5)

3. (3, 9), (-2, 8)

4. (0.2, -0.9), (0.5, -0.9)

5. (2, 5), (-3, -5)

6. (-6, -4), (4, 1)

Identify the slope of each equation.

7. $y = -1/2 x + 2$

* 8. $3y = 2x - 6$

* 9. $6x + 3y = 6$

* 10. $8x - 2y = 14$

* get y by itself first! *

Sep 4-8:13 AM

Kuta Software - Infinite Pre-Algebra

Name _____ Date _____ Period _____

Slope

Find the slope of each line.

1)

2)

3)

4)

5)

6)

7)

8)

Find the slope of the line through each pair of points.

9) (8, 10), (-7, 14) 10) (-3, 1), (-17, 2)

11) (-20, -4), (-12, -10) 12) (-12, -5), (0, -8)

13) (-19, -6), (15, 16) 14) (-6, 9), (7, -9)

15) (-18, -20), (-18, -15) 16) (12, -18), (11, 12)

Find the slope of each line.

17) $y = -5x - 1$ 18) $y = \frac{1}{3}x - 4$

19) $y = \frac{1}{5}x - 4$ 20) $x = 1$

21) $y = \frac{1}{4}x + 1$ 22) $y = -\frac{2}{3}x - 1$

23) $y = -x + 2$ 24) $y = -x - 1$

25) $2x + 3y = 9$ 26) $5x + 2y = 6$

27) $-7x - 4y = 18$ 28) $5x - 10y = -20$

29) $-3x - 6y = 12$ 30) $x + 8y = -6$

31)

| | |
|----|---|
| x | y |
| -4 | 5 |
| -2 | 4 |
| 0 | 3 |
| 2 | 2 |
| 4 | 1 |
| 6 | 0 |

32)

| | |
|----|----|
| x | y |
| -5 | -4 |
| -4 | -2 |
| -3 | 0 |
| -2 | 2 |
| -1 | 4 |
| 0 | 6 |

33)

| | |
|---|---|
| x | y |
| 0 | 5 |
| 1 | 4 |
| 2 | 3 |
| 3 | 2 |
| 4 | 1 |
| 5 | 0 |

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