

**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?

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

The coordinate grid shows the origin (0,0) at the center. The Mess Hall is located at (-4, -1) and the Cabins are located at (6, 3). The midpoint between these two points is marked at (1, 1), which is the location for the bathrooms.

Fair grounds


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



# \*WWK\*

slope	$\frac{\text{rise}}{\text{run}}$ - rate of change for an equation or line	$\frac{y_2 - y_1}{x_2 - x_1}$
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Sep 4-8:04 AM

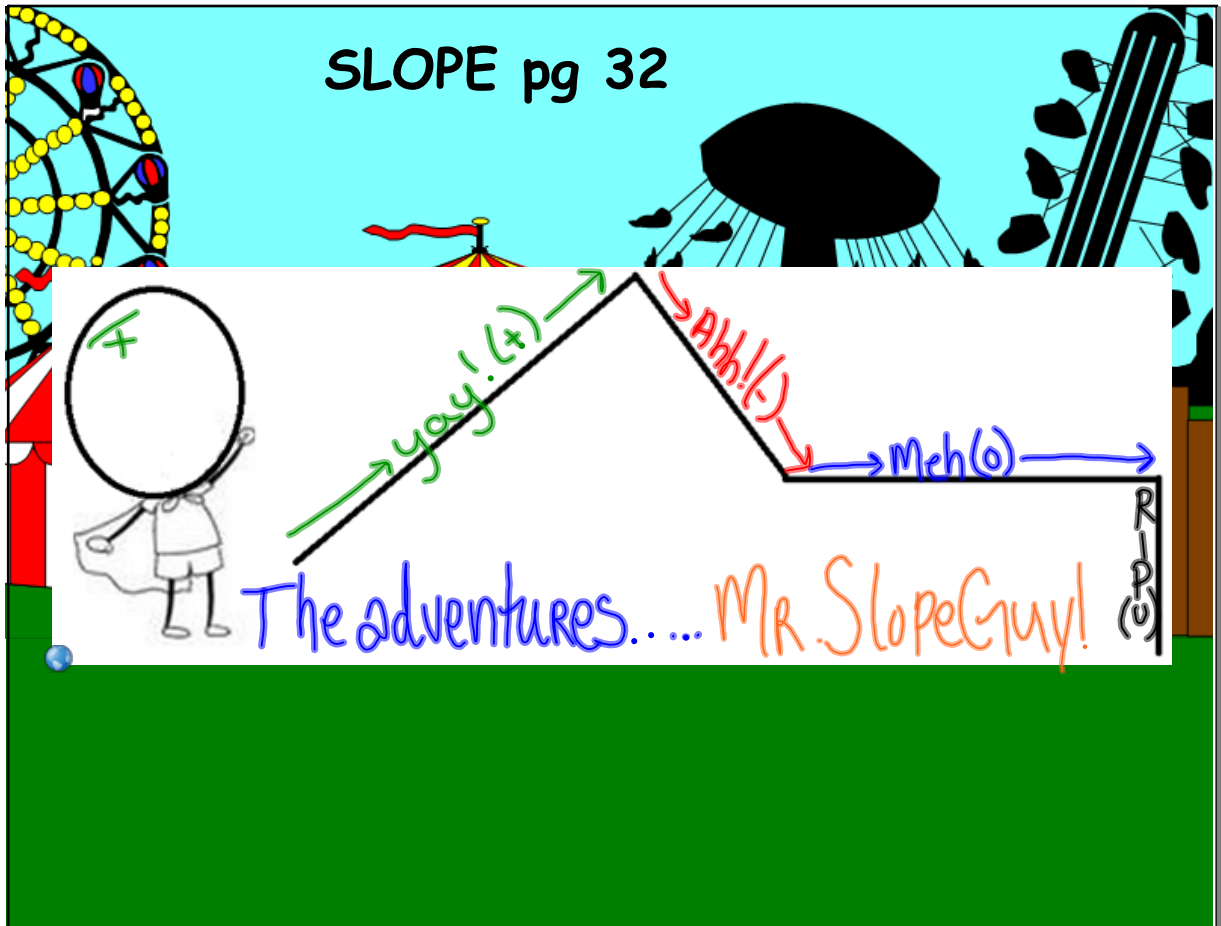
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- 13 DO NOW 8/14-8/18  
14 U1- Angle Practice (G)  
15 U1- Angle Pairs  
16 U1- Angle Pairs Examples  
17 U1- Angle Pairs Practice (G)  
18 U1- Quiz 1 (G)  
19  
20 DO NOW 8/21-8/25  
21  
22 U1- Constructions (G)  
23 U1- Parallel Line Angles  
24 U1- Parallel Line Angle Practice  
25 U1- Parallel Angles (G)  
26 U1- Study Guide (G)  
27 U1 Test 1 - (G)  
28 U1- Distance & Midpoint  
29 U1- Distance / Midpoint HW (G)  
30 U1- Distance Travel Activity (G)  
31 U1- Distance / Midpoint practice (G)  
32 U1- Slope

Aug 30-10:06 AM



TOC 32 U1 SLOPE

Fair grounds



SLOPE pg 32

Fair grounds

# SLOPE pg 32

**What is SLOPE?**

Slope describes the rate of change of a line.

$\frac{\text{rise}}{\text{run}} \quad \frac{\Delta y}{\Delta x}$

$\Delta = \text{change}$

**From a Table**

- Find the intercept of the x and y values
- Write the slope as  $\frac{-y}{x}$

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

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

x	y
-2	0
-1	2
0	4
1	6
2	8
3	10

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

**What is Slope des**

Sep 9-9:25 AM

# SLOPE pg 32

**From a Graph**

- Choose two points on the line
- Count the rise then the run
- Write the slope as  $\frac{\text{rise}}{\text{run}}$

$\frac{14}{5} = \text{slope}$

**What is SLOPE?**  
describes the \_\_\_\_\_ of a line.

- Solve the equation for \_\_\_\_\_
- Slope is the rate of change therefore, it is next to the variable x.
- The slope is the m of x.

$y = mx + b$

$y = 2x + 4$   
slope = 2

$6x - 3y = 12$   
 $-6x \quad -6x$   
 $\hline$   
 $-3y = -6x + 12$   
 $\frac{-3y}{-3} = \frac{-6x + 12}{-3}$   
 $y = 2x - 4$   
 slope = 2

**From an Equation**

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# SLOPE pg 32

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

$(-1, 4)$  &  $(6, -7)$   
 $x_1, y_1$      $x_2, y_2$

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-7 - 4}{6 - (-1)} = \frac{-11}{7}$$

**From Two Points**

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Ex 1 (pg 23)

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

$$(y_2 - y_1)$$

$$\frac{\quad}{(x_2 - x_1)}$$

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

Sep 4-8:13 AM

## Ex 2 (pg 23)

Find the slope of the following lines...

a)  $y = 7x + 3$

b)  $y = -1/2x$

c)  $y = -4$

d)  $8x - 2y = 16$

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

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

\*  $3y = 2x - 6$

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

\*  $8x - 2y = 14$

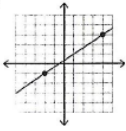
\* get y by itself first! \*

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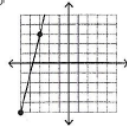
Slope

Find the slope of each line.

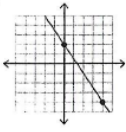
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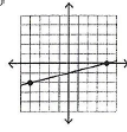
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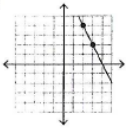
3)



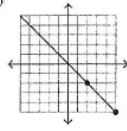
4)



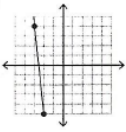
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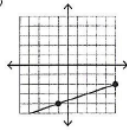
6)



7)



8)



- 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)  $y = -\frac{1}{3}x - 4$
- 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)  $5x + 2y = 6$

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

27)  $-7x - 4y = 18$

29)  $-3x - 6y = 12$

28)  $5x - 10y = -20$

30)  $x + 8y = -6$

Sep 13-9:27 AM



Aug 30-1:09 PM