

Do Now: Simplify

- $\frac{8-5}{6-2} = \frac{3}{4}$
- $\frac{3-(-1)}{4-5} = -4$
- $\frac{7-7}{0-(-4)} = 0$

Pre-Algebra Quiz 8.1-8.2

- Explain how to tell if a graph represents a function.
Write your answer on a separate sheet of paper.
- Which of the following relations is a function?
 a. $\{(5,1), (2,9), (2,9), (2,6)\}$
 b. $\{(5,8), (2,9), (0,5), (9,5)\}$
 c. $\{(0,3), (7,5), (9,8)\}$
 d. $\{(1,4), (-1,1), (3,4), (3,5)\}$
- Use the Vertical Line Test to determine if the graph represents a function or not.
 a.
 b.
 c.
 d.
- Which graph does NOT represent a function?
 a.
 b.
 c.
 d.

Circle one: Function or Not a function

Use a mapping diagram to determine whether the relation is a function.

$\{(0,-9), (-1,3), (6,7), (6,-1)\}$

Circle one: Function or Not a function

Inputs Outputs

-1	-9
0	-1
6	3
6	7

Vert. Line Test.

4. Which ordered pair is a solution of the equation $-2x - 4y = 9$?

a. $(-4, -1)$
 b. $(-1, -4)$
 c. $(4, -1)$
 d. $(-1, 4)$

Find the value of "a" that makes the ordered pair a solution of the equation.

7. $-3a + 4(-6) = -42$

8. $y = 9$

9. $x = -3$

Write the equation in function form. Then graph the linear equation. Complete a table on a separate sheet of paper.

$6x - 3y = 15$

$-3y = -6x + 15$

$-3y = -6x + 15$

$y = -2x - 5$

$y = 2 - 5$

$y = -3$

x	y
-2	-9
-1	-7
0	-5
1	-3
2	-1

8.4 The Slope of a Line

8.F

- SWBAT find and interpret slopes of lines.
- SWBAT create representations to communicate mathematical ideas.

Calculators: No

slope - the ratio of a line's vertical change (rise) to its horizontal change (run)

"Uphill" "Downhill" Horizontal Vertical

Positive Slope Negative Slope Slope = 0 Slope is Undefined

$y = mx + b$

slope

$y = b$

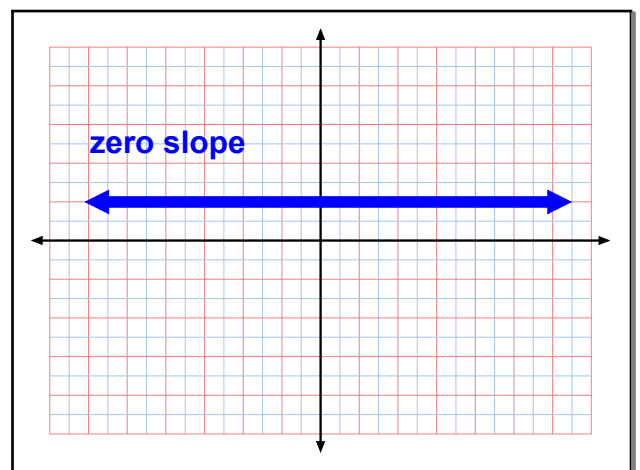
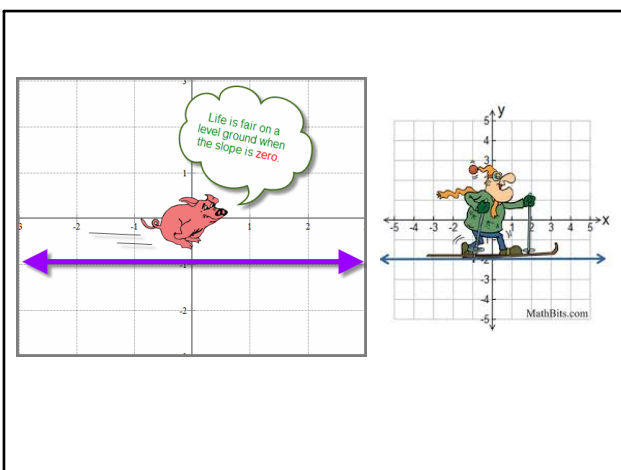
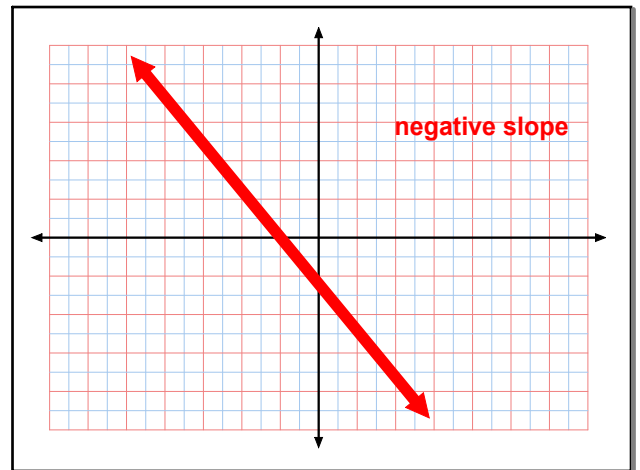
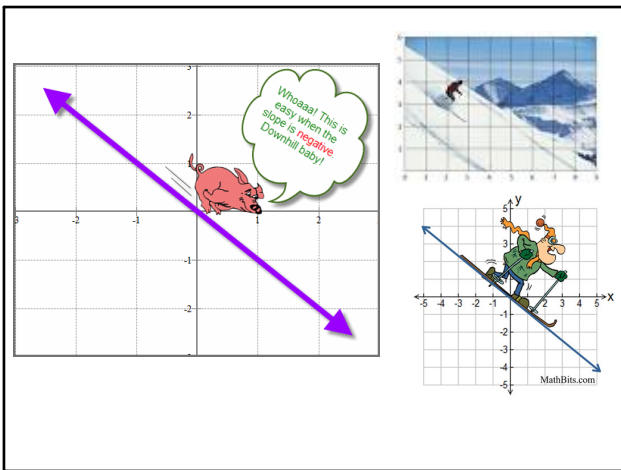
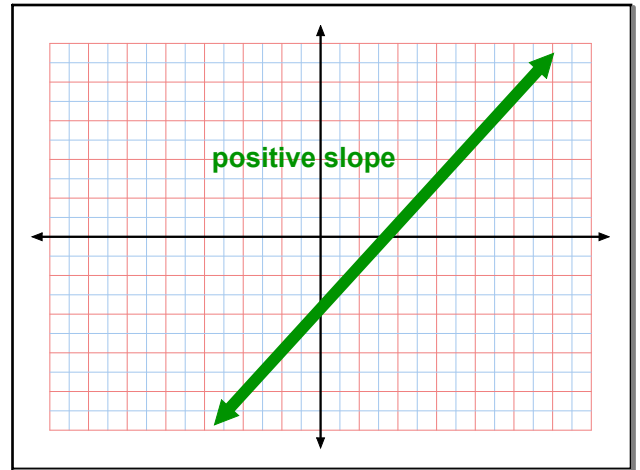
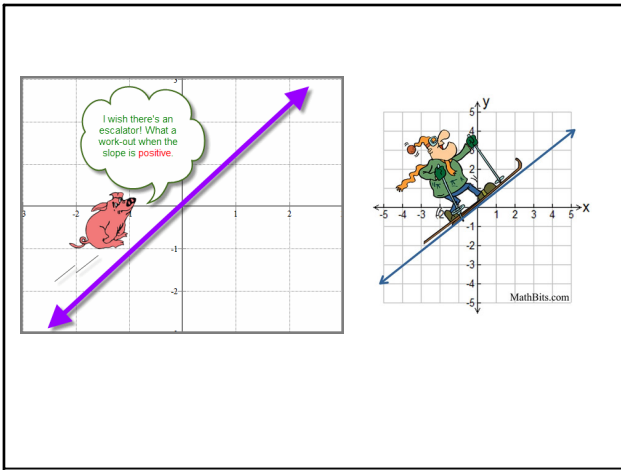
$y = 3$

$y = 5$

$y = 0x + 5$

$= 0 + 5$

$= 5$



Identify the slope of the sled in each comic as positive, negative, undefined, or zero.

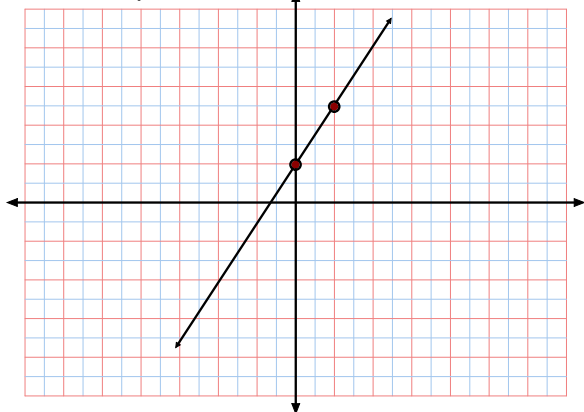
$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{difference in } y \text{ - coordinates}}{\text{difference in } x \text{ - coordinates}}$$

A ramp has a rise of 3 feet and a run of 18 feet.
Find its slope.

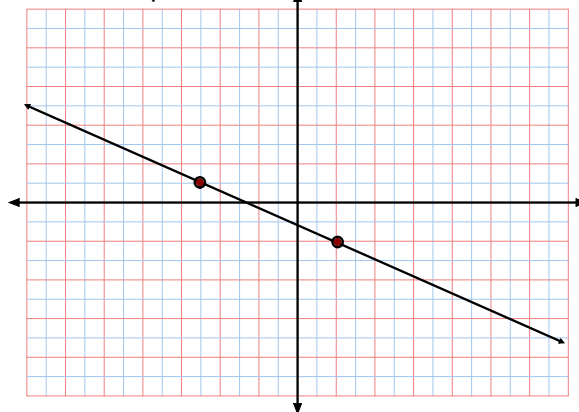
A ramp has a rise of 6 feet and a run of 10 feet.
Find its slope.

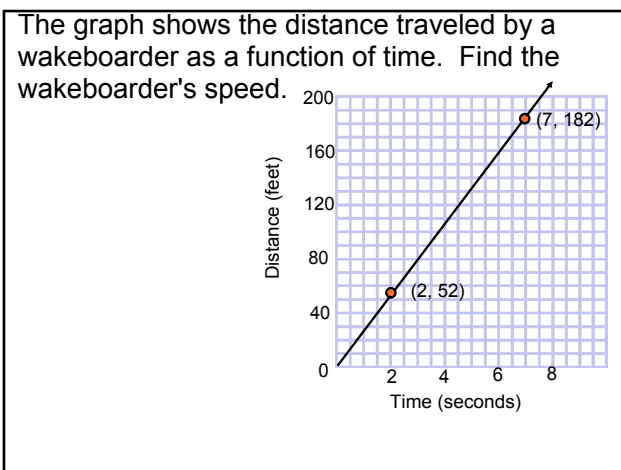
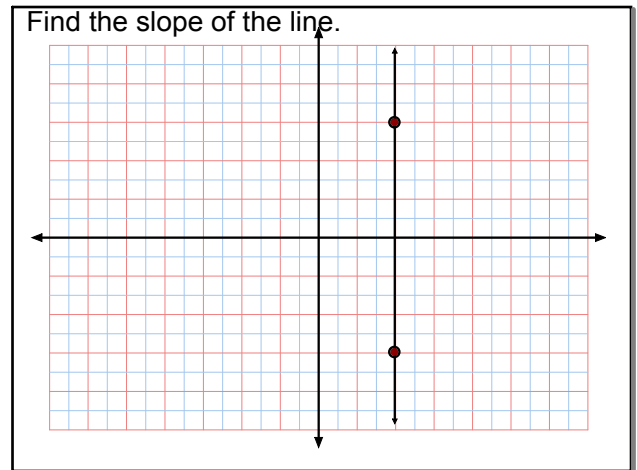
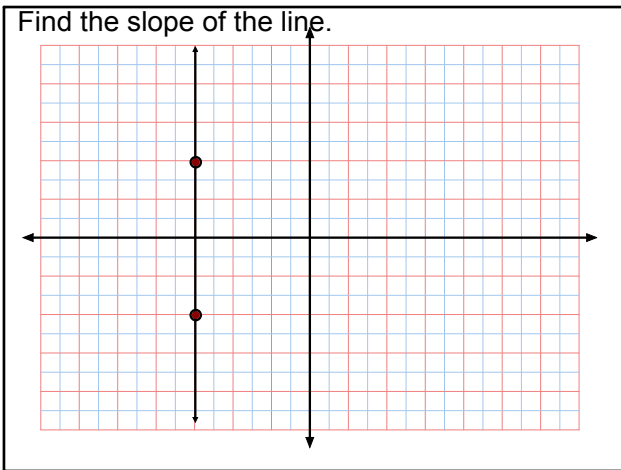
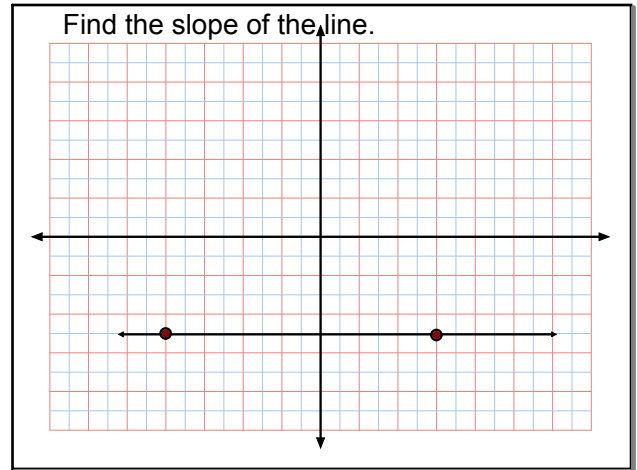
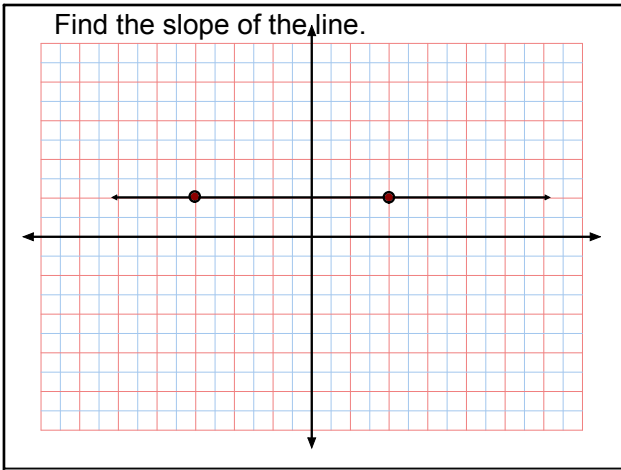
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Find the slope of the line.



Find the slope of the line.





Exit Pass 8.4

a.) What information about the wakeboarder can you obtain from the slope?

b.) A sea monster's top speed is about 20 feet per second. Suppose you made a graph showing the distance traveled by a sea monster as a function of time. How would the graph for the sea monster compare with the graph for the wakeboarder? Explain your thinking.

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the workbook.

Workbook pg.



Reflection of Today's Lesson

8.4 The Slope of a Line

8.F

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- SWBAT create representations to communicate mathematical ideas.

Calculators: No

Homework

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