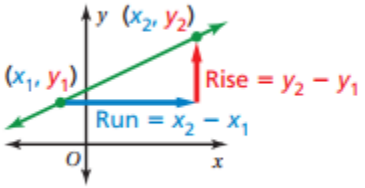
Name:_____ Date:_____

Slope of a Line-Recap
Algebra (Grade 8)

Slope

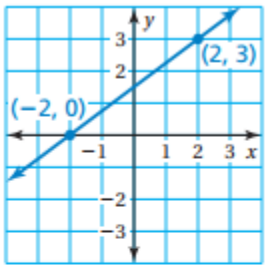
The **slope** m of a line is a ratio of the change in y (the **rise**) to the change in x (the **run**) between any two points, (x_1, y_1) and (x_2, y_2), on the line.

$$m = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$



Exercise #1: *Find the slope of each line below. Also state whether the slope is positive or negative.*

7.



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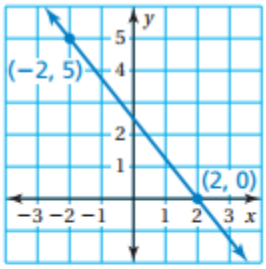

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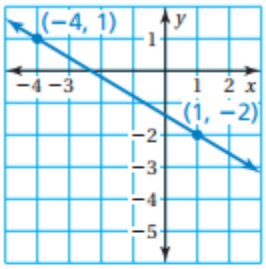

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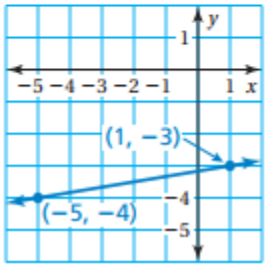

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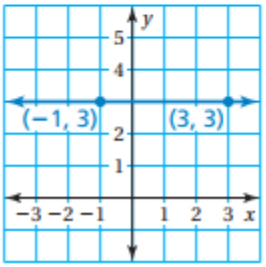

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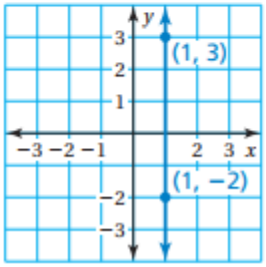

Exercise #2:

Find the slope of the line through the given points.

13. $(4, -1), (-2, -1)$

14. $(5, -3), (5, 8)$

15. $(-7, 0), (-7, -6)$

16. $(-3, 1), (-1, 5)$

17. $(10, 4), (4, 15)$

18. $(-3, 6), (2, 6)$

Exercise #3:

The points in the table lie on a line. Find the slope of the line.

21.

x	1	3	5	7
y	2	10	18	26

22.

x	−3	2	7	12
y	0	2	4	6

23.

x	−6	−2	2	6
y	8	5	2	−1

24.

x	−8	−2	4	10
y	8	1	−6	−13

Use an equation to find the value of k so that the line that passes through the given points has the given slope.

27. $(1, 3), (5, k); m = 2$

28. $(-2, k), (2, 0); m = -1$

29. $(-4, k), (6, -7); m = -\frac{1}{5}$

30. $(4, -4), (k, -1); m = \frac{3}{4}$