

# Today's Plan:

**Learning Target (standard):** I will describe the slope of a line as a rate of change. I will use this rate of change in applied problems.

**Students will:** Complete practice problems over previous concepts at the boards and take a quiz.

**Teacher will:** Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide quiz problems.

**Assessment:** Board work, homework check and quiz

**Differentiation:** Students will work at the board, go over and correct homework at their seats and actively engage in quiz problems.

NAME \_\_\_\_\_

## BELL RINGER



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1) Graph  $3x+5y = 10$  using a t-chart.

2.) Simplify  $\frac{1}{2} \cdot \frac{5}{6} = \frac{5}{12}$

3.) Is (2, 3) a solution to the equation  $y = 2x - 1$ ?

$$3 = 2(2) - 1$$

$$3 = 4 - 1$$

$$3 = 3 \checkmark$$

yes

Graph using a  $t$ -chart.

$$3x + 5y = 10$$

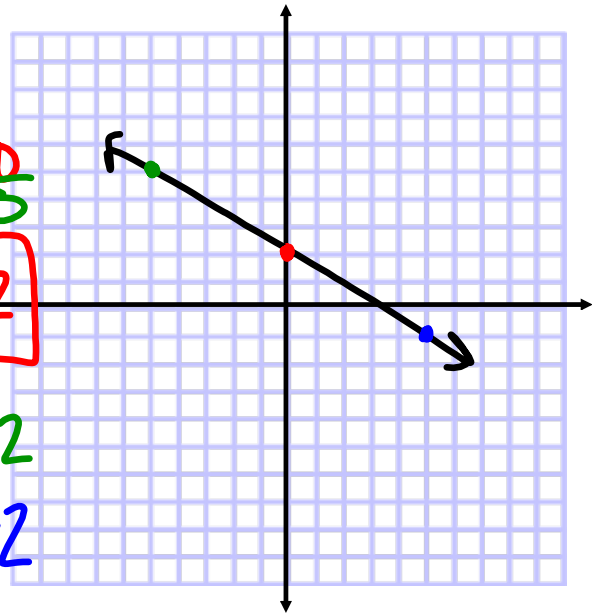
$x$	$y$
-5	5
0	2
5	-1

$$5y = -3x + 10$$

$$y = -\frac{3}{5}x + 2$$

$$y = -\frac{3}{5}(-5) + 2$$

$$y = -\frac{3}{5}(5) + 2$$



Find the slope.

$$5) (-12, 0) \text{ \& } (-3, 16)$$

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

$$m = \frac{16 - 0}{-3 - (-12)} = \frac{16}{9}$$

$$m = \frac{16}{9}$$

Find the slope.

$$y = mx + b$$

$$11) 6x + y = 4$$

$-6x$                    $-6x$

$$y = -6x + 4$$

$$m = -6$$

Find the missing value.

$$17) (-4, y) \text{ \& } (1, 0)$$

$$m = -\frac{1}{5}$$

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

$$-\frac{1}{5} = \frac{0 - y}{1 + 4}$$

$$-\frac{1}{5} = \frac{0 - y}{5}$$

$$-1 = 0 - y$$

$$-1 = -y$$

$$y = 1$$

Use the 6-step process to describe the rate of change.

John threw 6 passes for 112 yards in last Friday's football game. He then threw 8 passes for 124 yards in this week's game.



① independent - # of passes thrown  
dependent - # of yards

$$\textcircled{2} \text{ RoC} = \frac{\Delta \text{dependent}}{\Delta \text{independent}}$$

$$\textcircled{3} \text{ RoC} = \frac{\Delta \text{yards}}{\Delta \text{passes}}$$

$$\textcircled{4} \text{ RoC} = \frac{124 - 112 \text{ yards}}{8 - 6 \text{ passes}}$$

$$\textcircled{5} \text{ RoC} = \frac{12 \text{ yards}}{2 \text{ passes}} = \frac{6 \text{ yards}}{1 \text{ pass}}$$

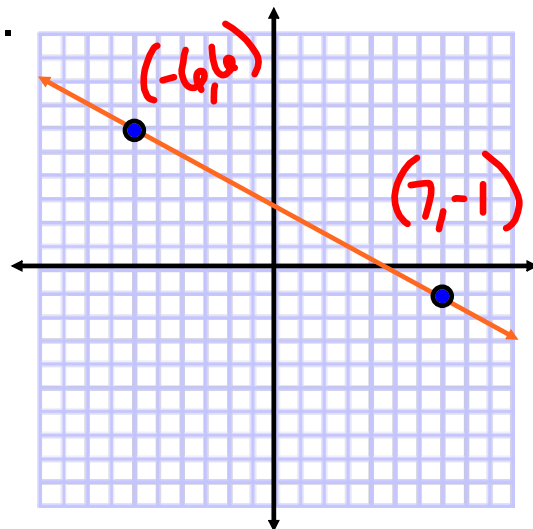
⑥ John throws for 6 yards every pass.

Find the slope of the line.

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

$$= \frac{-1 - 6}{7 + 6}$$

$$m = -\frac{7}{13}$$



Find the slope of the line.

$$3x + 7y = 21$$

$-3x$ 
 $-3x$

$$\frac{7}{7}y = \frac{-3x}{7} + \frac{21}{7}$$

$$y = -\frac{3}{7}x + 3$$

$$m = -\frac{3}{7}$$

Each pair of points lies on a line with the given slope. Find the missing value.

$$(4, 3), (5, y)$$

$$m = -\frac{3}{4}$$

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

$$-\frac{3}{4} = \frac{y - 3}{5 - 4}$$

$$\cancel{\frac{-3}{4}} = \frac{y - 3}{\cancel{1}}$$

$$-3 = 4(y - 3)$$

$$-3 = 4y - 12$$

$$9 = 4y$$

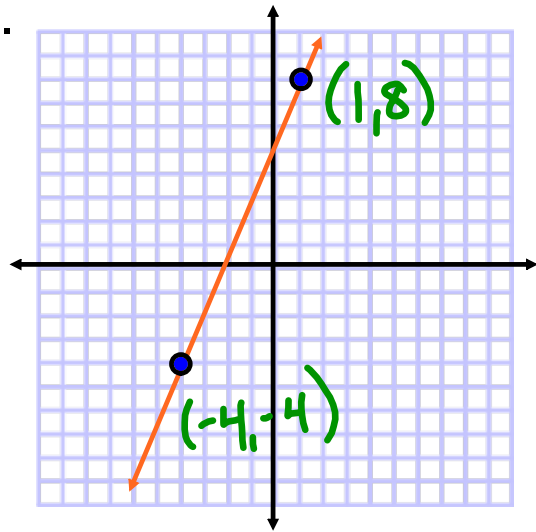
$$y = \frac{9}{4}$$

Find the slope of the line.

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

$$= \frac{8 - (-4)}{1 - (-4)}$$

$$m = \frac{12}{5}$$



Find the slope of the line.

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

$$= \frac{4 - 4}{6 - (-3)}$$

$$= \frac{0}{9}$$

$$m = 0$$

