Bell Work:

Is it a relation? Is it a function?
Identify the domain and range.

(4, 15) (5, -2) (4, 15) (-62, 15)
(0, 12) (1/2, 92) (0, 0) (-8, 12)

For Last Time…

New Material

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ALGEBRA 3

Day 16

Chapter 2 Section 3
Linear Equations

Objective: Find the slope of a line, and write an equation in slope intercept form

HLQ: Explain how/why you think that mathematicians named the formulas “Slope-Intercept” and “Point-Slope” instead of something else.

Linear Equations:

- **Slope – Intercept Form:** **y = mx + b**

  (m is the slope, and b is the y-intercept)

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

Write the equation given the following information. Use your graphing calculator to check.

1.) $m = 3/5$ and $b = -4$

2.) slope is -2 and the y-intercept is 5

3.) the line passes through (0, 3) and (5, 9)

Graphing (with or without a calculator)

- **With a calculator:**

  Write the equation in slope-intercept form by solving for y
  Trace to 2 points on the graph
  Plot the two points on the graph paper

- **Without a calculator:**

  Write the equation in slope-intercept form by solving for y
  Find and plot the y-intercept (0, b)
  Find the slope (m) and use it to plot a second point
  Draw a line through the two points

  * or make a t-chart

Examples: Graph. *And State Domain and Range*

1.) $y = \frac{2}{5}x - 1$

2.) $6x + 2y - 10 = 0$

3.) $y = 2$

For Next Time…

New Material

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Mixed Review

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