

## BUTCHER- TECHNICAL MATH B – PERIOD 3 – OFF-SITE LEARNING PACKET DAY 2

Instructor: Nancy Butcher

Date: Day 2

Program/Class: Tech Math B

Period: 1,2,3

### State Indicator/Competency:

- Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).
- Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

### Instructional Objective(s):

- Students will graph linear functions in  $y=mx+b$  format by recognizing that  $m$  is slope and  $b$  is the intercept of the  $y$ -axis with 80% accuracy

### Materials:

- Pencil, straight edge, Packet 2

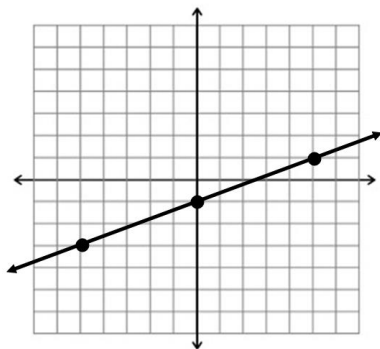
### Method of Instruction:

- Independent

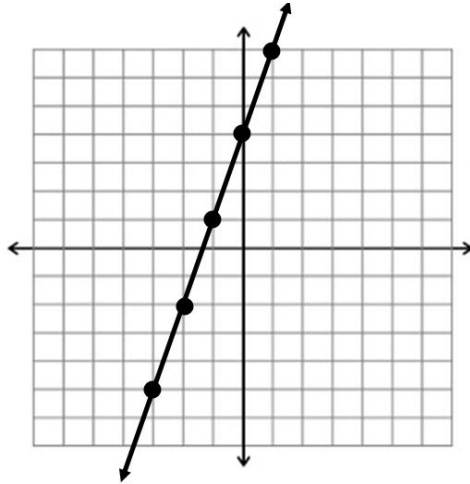
### Activities:

Complete Packet 2 Worksheet

- Example 1: Graph  $y = \frac{2}{5}x - 1$ 
  - When  $y = mx+b$ :  $m$  is the slope and  $b$  is the  $y$  intercept.
  - $m = \frac{2}{5}$  and  $b = -1$
  - First find a point on the  $y$  axis which corresponds with  $b$  and plot.  
In this example:  $(0, -1)$
  - The slope is  $\frac{2}{5}$  which is  $\frac{\text{rise}}{\text{run}}$  meaning you move up the  $y$  axis 2 spaces in the positive direction and “run” on the  $x$  axis 5 spaces in the positive direction resulting in the following graph:



- Example 2: Graph  $y=3x+4$   
 $m = 3$  and  $b = 4$   
First plot  $(0,4)$  and then plot a second point using the slope  $\frac{3}{1}$



**Assessment:**

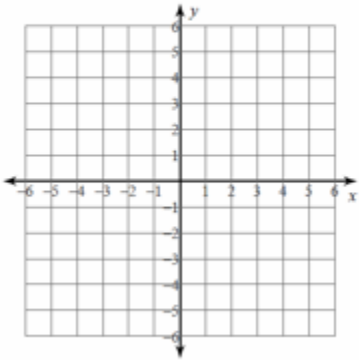
Packet 2: 10 pts

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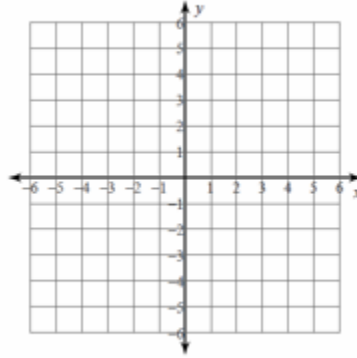
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Sketch the graph of each line.

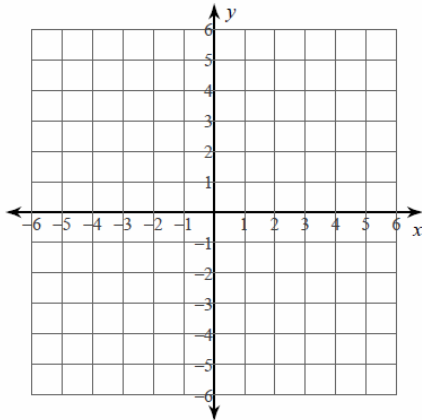
1)  $y = \frac{7}{2}x - 2$



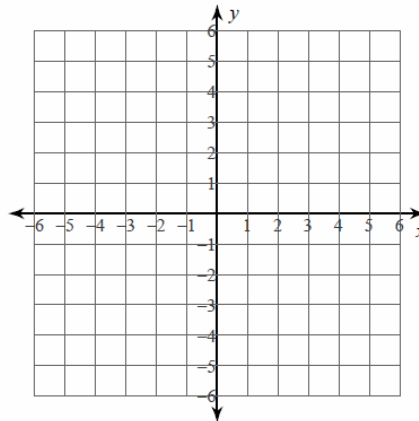
2)  $y = -6x + 3$



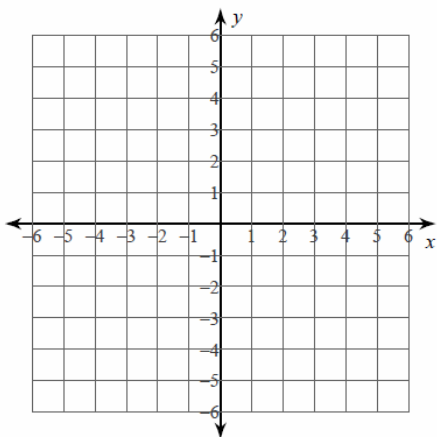
3)  $y = -5$



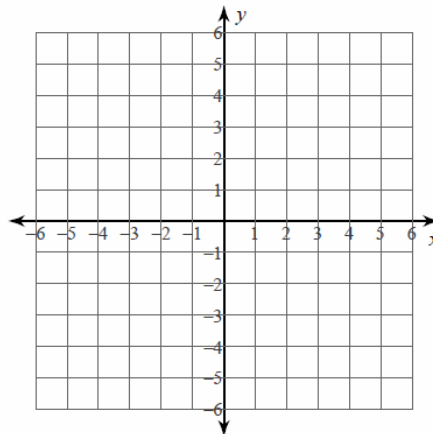
4)  $y = \frac{6}{5}x + 1$



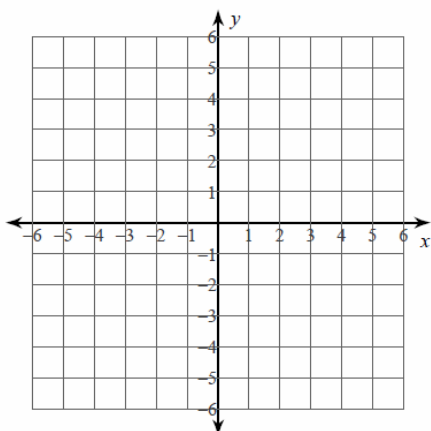
5)  $y = \frac{1}{4}x + 2$



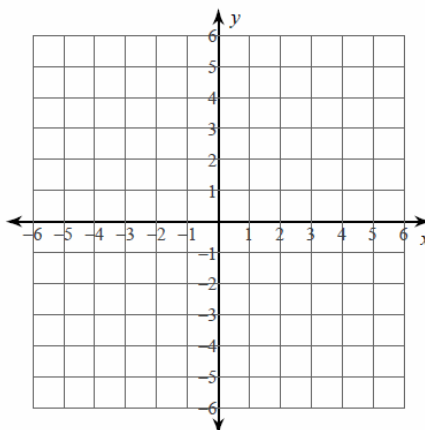
6)  $x = 5$



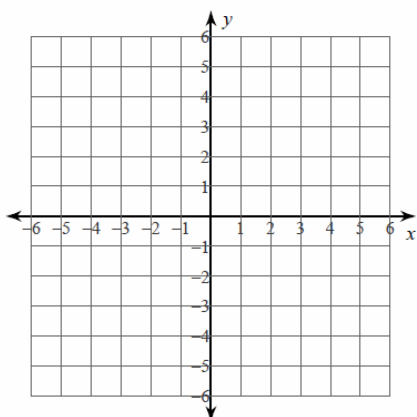
7)  $y = \frac{5}{3}x$



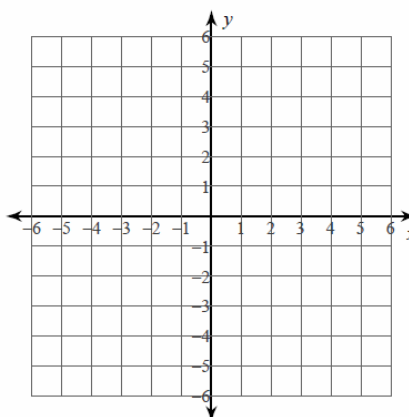
8)  $x = 0$



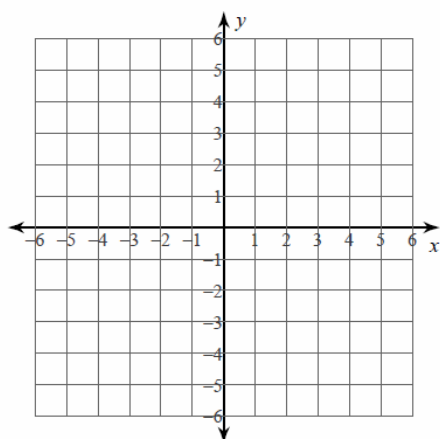
9)  $y = -\frac{1}{3}x + 3$



10)  $y = \frac{1}{5}x - 4$



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



12)  $y = 2x + 5$

