

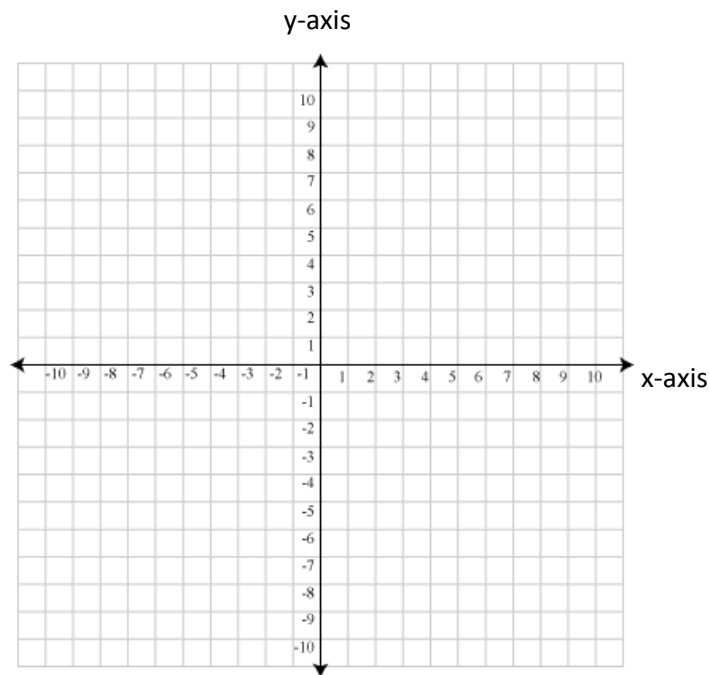
Name: _____

Calculator Lab (TI-84)
Investigating Linear Equations

Make sure that your graphing window is set appropriately before beginning. Start by graphing Y_1 and observing the graph. Then add Y_2 and again observe the graph – write down any observations you make. Then continue through Y_3 and Y_4 in the same fashion. Draw and label each graph in the area provided. This method should be followed for each set of equations. Additionally, answer the questions in each section, based off of your observations, using appropriate mathematical language.

Observations

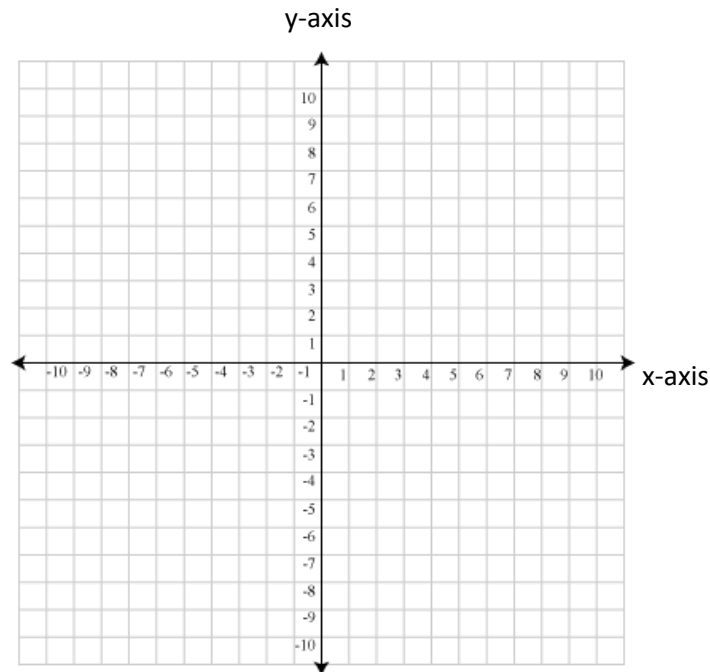
1. A) Graph: $Y_1 = x$
 $Y_2 = x + 2$
 $Y_3 = x + 5$
 $Y_4 = x + 8$



B) How does the value of b affect the graph of the equation $y = x + b$?

Observations

2. A) Graph: $Y_1 = x$
 $Y_2 = x - 1$
 $Y_3 = x - 3$
 $Y_4 = x - 6$

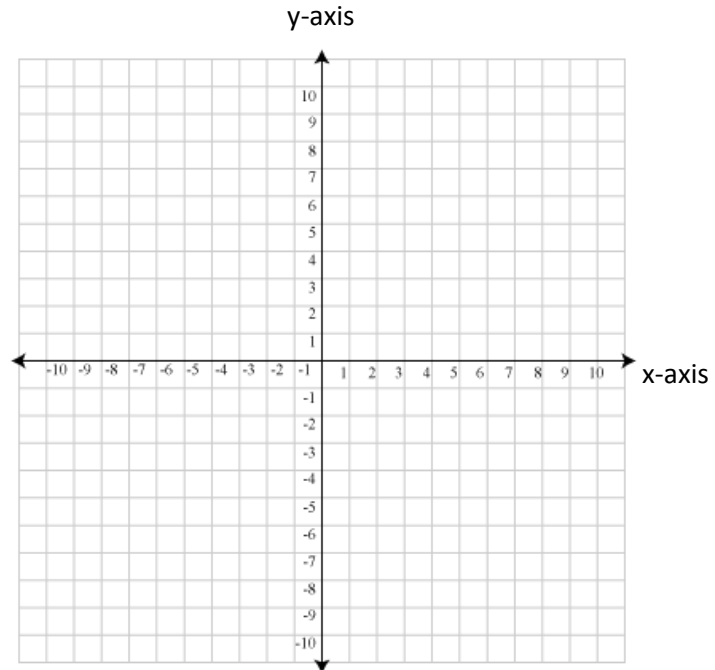


B) Does your guess from section 2 about how the value of b affects the graph of $y = x + b$ still make sense? If not, guess again!

C) How do the b -values in section 2 differ from those in section 1? How does this affect the graph?

Observations

3. A) Graph: $Y_1 = x$
 $Y_2 = 2x$
 $Y_3 = 5x$
 $Y_4 = 8x$



B) How does the value of m affect the graph of the equation $y = mx$?

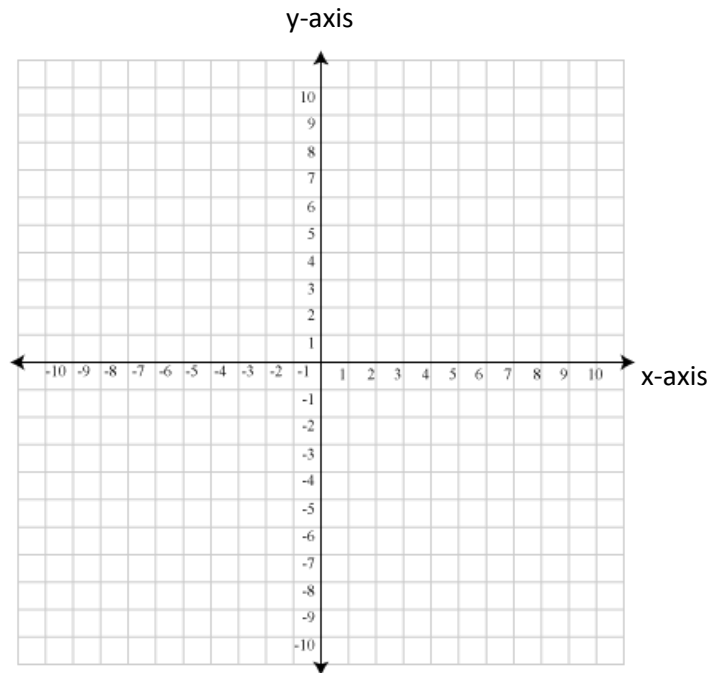
Observations

4. A) Graph: $Y_1 = x$

$$Y_2 = \frac{1}{2}x$$

$$Y_3 = \frac{1}{4}x$$

$$Y_4 = \frac{1}{8}x$$



B) Does your guess from sections 3 about how the value of m affects the graph of $y = mx$ still make sense? If not, guess again!

C) How do the m -values in section 4 differ from those in sections 3? How does this affect the graph?

Observations

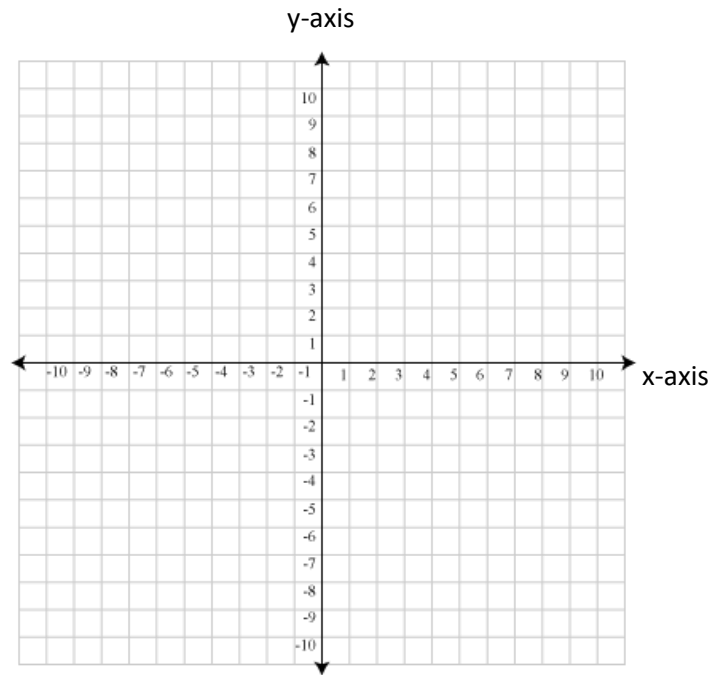
5. A) Graph: $Y_1 = -x$

$$Y_2 = -3x$$

$$Y_3 = -5$$

$$Y_4 = -\frac{1}{2}x$$

$$Y_5 = -\frac{1}{4}x$$



B) Does your guess from sections 3 and 4 about how the value of m affects the graph of $y = mx$ still make sense? If not, guess again!

C) How do the m -values in section 5 differ from those in sections 3 and 4? How does this affect the graph?

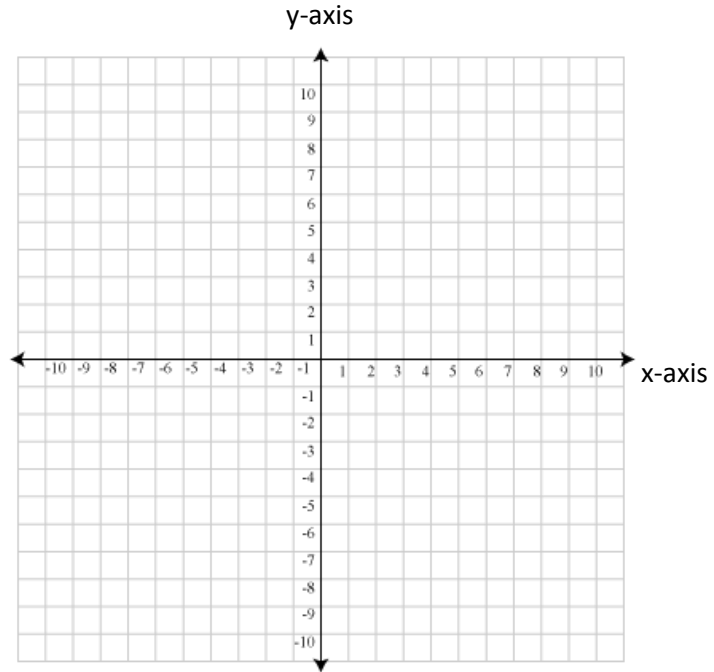
Observations

6. A) Graph: $Y_1 = 2x + 1$

$$Y_2 = -3x + 4$$

$$Y_3 = 5x - 6$$

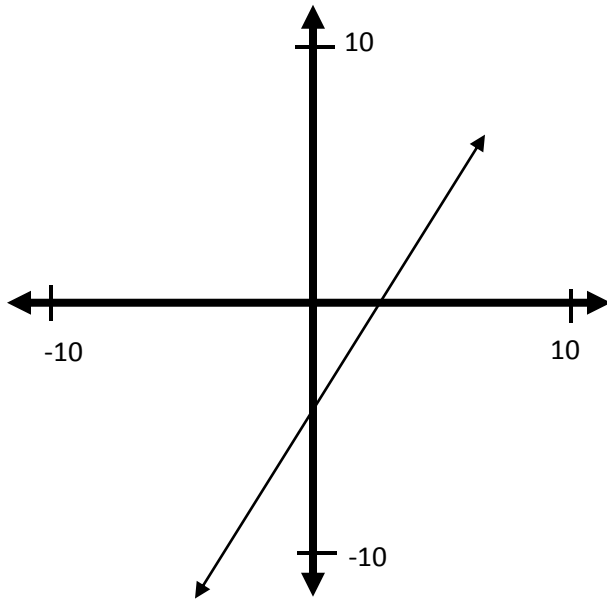
$$Y_4 = -\frac{3}{4}x - 2$$



B) Do your guesses about how the values of b and m affect the graph of $y = mx + b$ still make sense? If not, guess again!

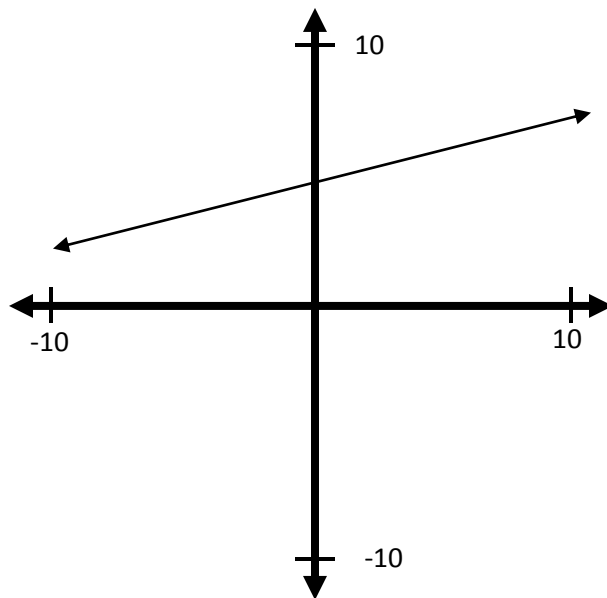
7. Write a ***possible*** algebraic equation for the graphs below. Explain your reasoning:

A)



Explanation:

B)



Explanation: