Name_____ Date_____ Period_____

Linear Tables, Graphs, and Equations

1. Is this a linear relationship? Explain why or why not.

X	Y
-3	9
-2	4
-1	1
0	0
1	1

2. The following tables show a linear relationship. Fine the slope and y-intercept for each table, and write the equation for each table in $y = mx + b$ format.

Table 1	
x	**y**
-5	3
-4	3
-3	3
-2	3
-1	3

m =

b =

equation:

Table 2	
x	**y**
0	10
3	19
5	25
10	40
12	46

m =

b =

equation:

Table 3	
x	**y**
0	-3
2	-6
4	-9
6	-12
8	-15

m =

b =

equation:

3. Write an equation that would have a negative slope and a y-intercept of 13.

4. How many different equations can you write, based on the description in #3?

5. Write an equation with a positive slope of 1 and a y-intercept of 0.

6. How many different equations can you write, based on the description in #5?

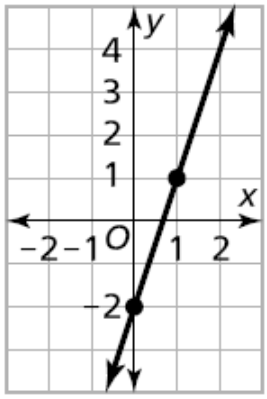
7. For each equation below, describe what happens to the y values as the x values increases by one.

   a. $y = -4x + 50$

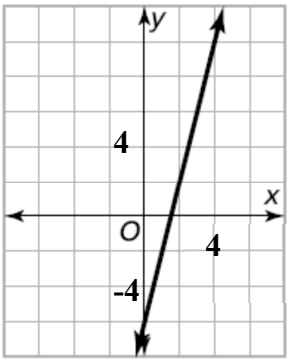
   b. $y = x$

8. For each linear graph below, describe what happens to the y values as the x values increases by one.

   a.

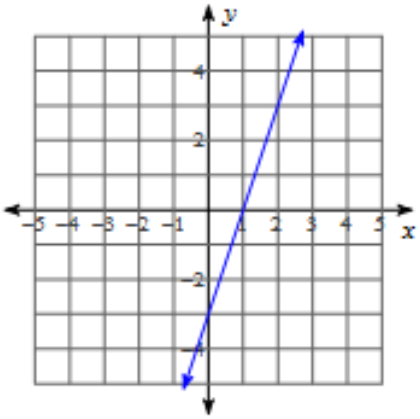


   b.



9. Fine the slope and y-intercept for the following graphs, and write the equation for each graph in $y = mx + b$ format.

   a.

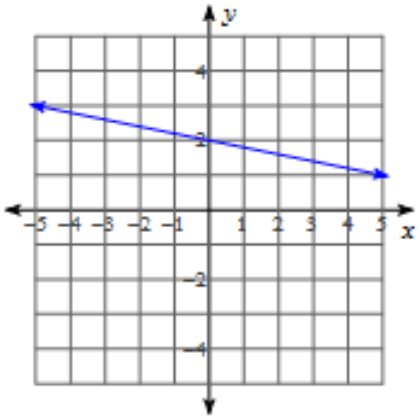


   m =

   b =

   equation:

   b.



   m =

   b =

   equation: