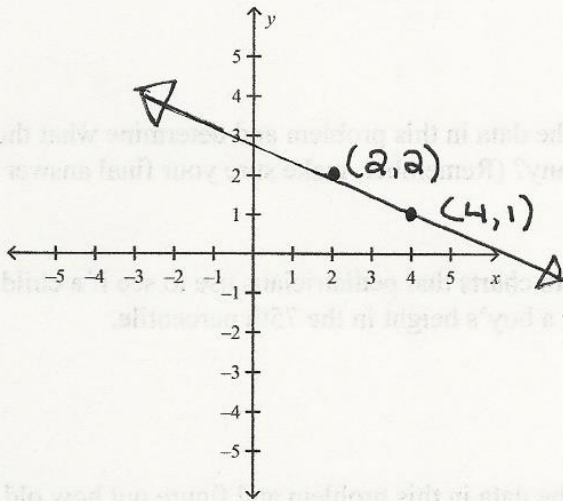
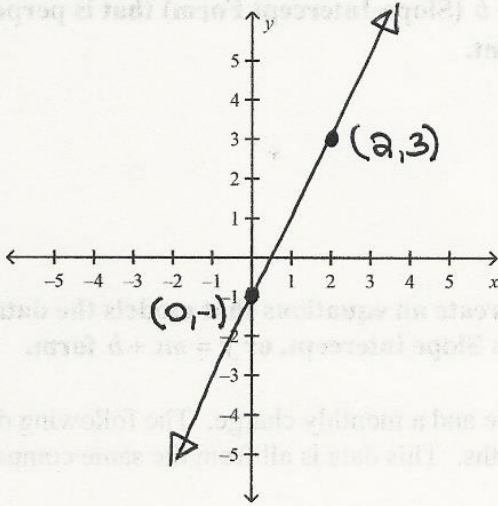


**Unit #1-Part #1-Test Review Assignment #1: Understanding Equations and how to Create and Write Equations of Linear Lines from Data-Review (Reference: Lesson #26 & #36 in book)**

**Problem**

1. For each of the following graphs, please create an equation in  $y = mx + b$  (Slope-Intercept Form) that corresponds to information given.



- 2.
3. For each of the following create an equation in  $y = mx + b$  (Slope-Intercept Form) using the two given points and the Point Slope Formula.

3. (3,2) and (0,4)

4. (5,3) and (7,1)

5. For each of the following create an equation in  $y = mx + b$  (Slope-Intercept Form) that is parallel to the given equation and passes through the given point.

5.  $y = -2x - 5$  and passes through  $(-2, 5)$

6.  $y = \frac{1}{3}x + 18$  and passes through  $(9, -2)$

7. For each of the following create an equation in  $y = mx + b$  (Slope-Intercept Form) that is perpendicular to the given equation and passes through the given point.

7.  $y = 4x - 9$  and passes through  $(8, 3)$

8.  $y = -\frac{1}{2}x + 8$  and passes through  $(-3, 7)$

9. For each of the following situational word problems, create an equation that models the data that is given in each problem. Express your final equations in Slope intercept, or  $y = mx + b$  form.

9. A cellular phone company charges a one-time setup fee and a monthly charge. The following data shows information for the total cost based on the number of months. This data is all from the same company and for the same customer and phone.

Months	Total Cost (Dollars)
2	140
6	320
9	455

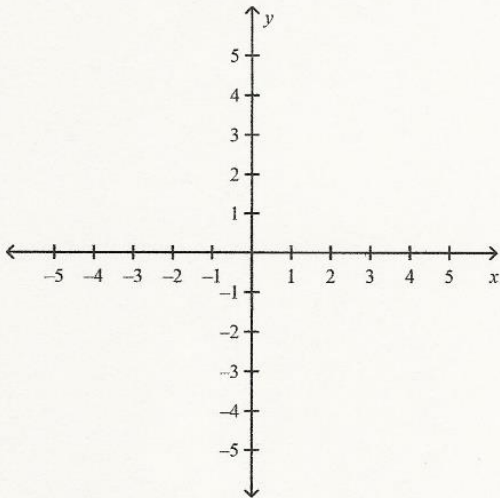
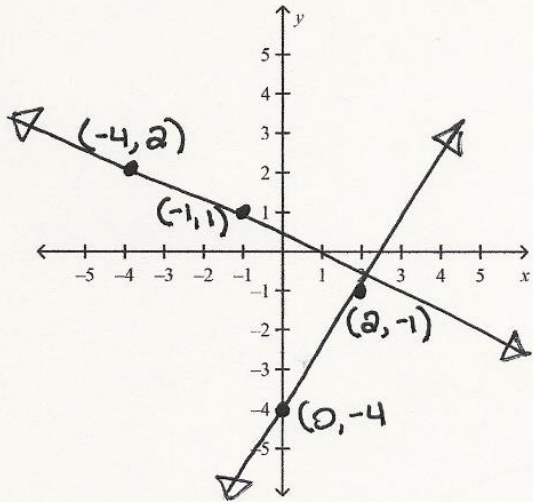
Use this data to help create an equation that models the data in this problem and determine what the one time setup fee and monthly charge is for this phone company? (Remember, make sure your final answer is in Slope-Intercept, or  $y = mx + b$  form.)

10. The Centers for Disease Control has developed growth charts that pediatricians use to see if a child's height is within a certain average. The following data is for a boy's height in the 75th percentile.

Age (Years)	Height (inches)
3	38.5
4	41.5
5	44.5

Use this data to help create an equation that models the data in this problem and figure out how old a boy would be if he had a height of 56.5 inches? (Remember, make sure your final answer is in Slope-Intercept, or  $y = mx + b$  form.)

11. For each of the following, figure out the slopes for each line and determine if the lines are parallel, perpendicular, or neither. (You can use the coordinate planes and graphs to help you if needed.)



12.

Line #1:  $(4, 3)$  and  $(5, 7)$ Line #2:  $(3, 2)$  and  $(7, 1)$ 

13. For each of the following problems, tell me whether these equations are parallel, perpendicular, or neither. (**HINT:** Solve them each for  $y$  and get them into  $y = mx + b$  form.)

13.  $-4x + 2y = 6$

$-2x + y = -6$

14.  $-6x - 2y = -10$

$-x + 3y = -18$