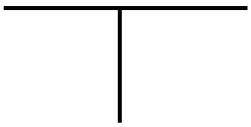
Name_____

ALGEBRA II JOURNAL
Linear Equations

1. a) In a function, each _____ is paired with _____.
   b) You can determine whether a graph is a function by using the _____.
   c) You can determine whether a set of ordered pairs is a function if _____
   _____.
2. a) The set of x-coordinates in a function is called _____.
   b) The set of y-coordinates in a function is called _____.
3. a) In function notation, "$y =$ " is written as _____.
   b) If you find $f(-4)$ and get a result of 9, what does that represent in terms of a graph? _____
   _____
4. Slope is defined to be _____.
5. How can you most quickly find the slope of a line in each of the following situations?
   a) a graph_____
   b) given two points _____
   c) given an equation in slope-intercept form _____
6. Show how to use a T-table to find the x- & y-intercepts. *Label which one is the x-intercept & which one is the y-intercept.*



7. The best way to ***graph*** a line in the form $y = mx + b$ is _____
   _____ while the best way to ***graph*** a line in the form $Ax + By = C$ is _____.
8. (a) When modeling a real world situation which contain two sets of data, you should find its linear equation by _____
   (b) When modeling a real world situation that contains an amount which varies over time and a fixed amount which does not change, you should find its linear equation by _____
   _____.
9. (a) The r value given when performing a linear regression is called the _____
   _____ and is used to describe _____
   _____.
   (b) The r^2 value given when performing a linear regression is called the _____
   _____ and is used to describe _____
   _____
10. State the 3 conditions necessary to determine if a regression line is a good fit.
    (a) _____
    (b) _____
    (c) _____

11. When an x-coordinate is placed in a greatest integer function, the resulting y-coordinate is determined by finding _____

_____.

12. Given a piecewise function with 4 pieces, you would find $f(5)$ by using _____ to determine into which piece 5 should be substituted.

13. Important Rules, Formulas, Etc.

List the following rules, formulas, or steps. When giving formulas, be sure to indicate what each part of the formula represents.

Key
m=
b=

a) Slope-intercept form of a line _____

b) Point-slope formula _____

c) Horizontal line: slope = _____ equation: _____

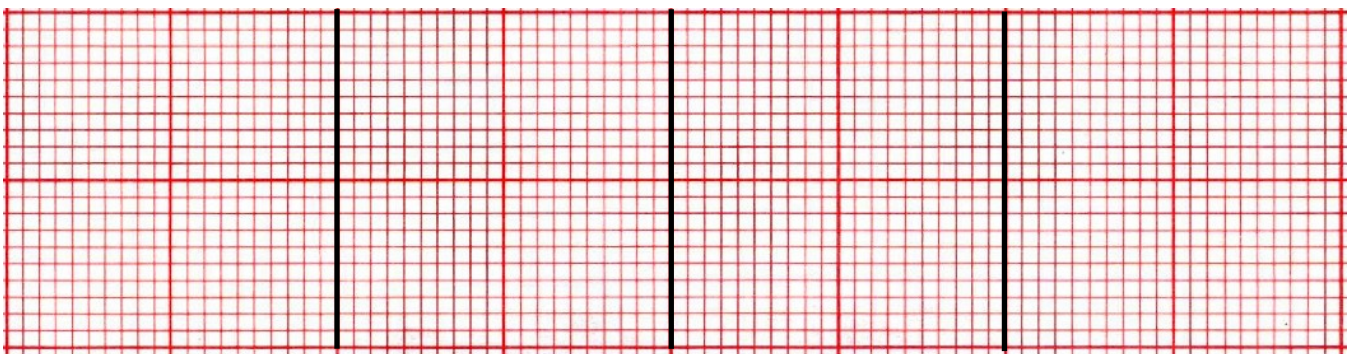
d) Vertical line: slope = _____ equation: _____

e) Slope of perpendicular lines _____ Slope of parallel lines _____

f) List the transformation rules for graphing and write an example ***equation*** of each ***by placing numbers*** in the proper location in the function $f(x) = |x|$.

Transformation	Rule	Example using $\|x\|$
Move down c units		
Move left c units		
Reflect over x-axis		
Change slope		
Move right c units		
Reflect over y-axis		
Move up c units		

g) Graph each of the following: $f(x) = -3,\ f(x) = x,\ f(x) = |x|, f(x) = [x]$.



The purple sheet of regression instructions should be placed in your portfolio with this journal.