

ALGEBRA II JOURNAL
Linear Equations

1. a) In a function, each _____ is paired with _____.
 b) You can determine whether a set of ordered pairs is a function _____

 c) You can determine whether a relation is a function given its graph by _____

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) The function notation " $f(x) =$ " represents the same thing as _____ in regular notation.
 b) If you find $f(7)$ and get a result of -3 , 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) given an equation in slope-intercept form _____
 b) a graph _____
 c) given two points _____
6. Given a linear equation in standard form, the x -intercept can be found by _____
 while the y -intercept can be found by _____.
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. (b) When modeling a real world situation which contains an amount which varies over time and a
 fixed amount which does not change, you should find its linear equation by _____

 (a) When modeling a real world situation which contain two sets of data, 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 _____

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

11. (a) When finding $f(\#)$ in a piecewise function, into how many of the pieces should you substitute
 the number? _____
 (b) You can determine which of the pieces to substitute the number into by _____

12. 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.



- a) Slope-intercept form of a line _____
- b) Point-slope formula _____
- c) Slope and equation of a horizontal line _____
- d) Slope and equation of a vertical line _____
- 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 right c units		
Move down c units		
Change slope		
Reflect over y -axis		
Move up c units		
Reflect over x -axis		
Move left c units		

g) Graph each of the following: $f(x) = 6$, $f(x) = x$, $f(x) = |x|$, and $f(x) = [x]$.

Attach the purple sheet of instructions for linear regression to this journal!