Complete the packet by working each question. Correct your packet

using the answer key (posted on class website [www.nshsdolan.weebly.com](http://www.nshsdolan.weebly.com)

If a question is incorrect, go back and try to find your mistake. Make your life easier by showing all your steps!

**LINEAR EQUATIONS and GRAPHS**

Describe two methods, one algebraic and one visual (on a graph paper  
for example), for finding the slope between two points on a line.

1. Find the slope of the line between the two points. You may use the slope formula or plot the points on graph paper and find the slope visually.

a.) (3, 8) and (–2, 5) b.) (6, 2) and (20, –3)

2. Slope-Intercept form of a line is y = mx + b. Which is the slope? Which is the y-intercept? What does each represent?

3. Write the equation of a line, in slope-intercept form, with slope of 3 passing through (–1, 4). Remember that you must SOLVE for the y-intercept.

4. Write the equation of a line, in slope intercept form passing through (10, 9) and (5, 7). Remember that you must SOLVE for the y-intercept.

5. Graph each of the following equations. You may use a table of values.

(HINT: Start with your starting point and use the slope to find other points that fall on the same line.)

a.) y = –2x + 3



|  |  |
| --- | --- |
| x | y |
|  |  |
|  |  |
|  |  |
|  |  |

b.) 



|  |  |
| --- | --- |
| x | y |
|  |  |
|  |  |
|  |  |
|  |  |

6. Find the equation of each line. Identify the slope and the y-intercept for each.

|  |  |
| --- | --- |
| a.)    Slope:  Y-intercept:  Equation: | b.)    Slope:  Y-intercept:  Equation: |
| c.)    Slope:  Y-intercept:  Equation: | d.)    Slope:  Y-intercept:  Equation: |