ALGEBRA 1 - SCRAPBOOK ACTIVITY Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**DUE DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Note: Each day of lateness will result in a 10-point deduction off the final score. No exceptions!**

Your objective is to create a scrapbook of main ideas for Algebra 1. You will be able to use this scrapbook to help you organize and retain these skills as you enter your math class next year. We will use white paper but you may embellish with construction paper if you like. You will hole punch the white papers and tie them together with yarn as your binding. There are coordinate planes that you can cut out and glue to your scrapbook if needed. Your scrapbook has to include, in order, but is not limited to the following criteria.

1. Cover page:
2. Name **5 points: \_\_\_\_\_\_\_\_\_\_**
3. Creativity (use of color, picture, and/or graph) **10 points: \_\_\_\_\_\_\_\_\_\_**
4. Neatness **10 points: \_\_\_\_\_\_\_\_\_\_**
5. Content: For each of the following sections, make sure you have a heading of some sort and either a definition, key concept, or some good examples. These sections must be included, **in order**, as they are listed below. However, you may add anything else you think will be helpful. Use the Algebra 1 textbook for references.

**\*\*Each section will receive 2 points for completion and 1 point for neatness yielding a total of 195 points!\*\***

1. Order of operations **3 points: \_\_\_\_\_\_\_\_\_\_**
2. Definition of a function. **3 points: \_\_\_\_\_\_\_\_\_\_**
3. Definition of domain and range including an example. Show domain and range:

a. in a table **3 points: \_\_\_\_\_\_\_\_\_\_**

b. as ordered pairs **3 points: \_\_\_\_\_\_\_\_\_\_**

1. on a graph **3 points: \_\_\_\_\_\_\_\_\_\_**
2. Ways to represent a function (concept summary on page 45) **3 points: \_\_\_\_\_\_\_\_\_\_**
3. Vertical line test (see page 49) **3 points: \_\_\_\_\_\_\_\_\_\_**
4. What is the distributive property? Show an example. **3 points: \_\_\_\_\_\_\_\_\_\_**
5. Parts of an expression (give examples of each):
6. terms **3 points: \_\_\_\_\_\_\_\_\_\_**
7. like terms **3 points: \_\_\_\_\_\_\_\_\_\_**
8. coefficients **3 points: \_\_\_\_\_\_\_\_\_\_**
9. constant terms **3 points: \_\_\_\_\_\_\_\_\_\_**
10. Steps for solving linear equations (concept summary on page 156) **3 points: \_\_\_\_\_\_\_\_\_\_**
11. Solving equations with variables on both sides (both examples on page 154) **3 points: \_\_\_\_\_\_\_\_\_\_**
12. Show a coordinate plane, label all 4 quadrants. Show what signs the ordered

pairs will have that lie in the quadrants (see page 206) **3 points: \_\_\_\_\_\_\_\_\_\_**

1. Equations of horizontal and vertical lines (concept summary on page 217) **3 points: \_\_\_\_\_\_\_\_\_\_**
2. Definition of a linear equation with an example using numbers. **3 points: \_\_\_\_\_\_\_\_\_\_**
3. What is an x-intercept? What is a y-intercept? Show an example of each. **3 points: \_\_\_\_\_\_\_\_\_\_**
4. Finding the slope of a line:
5. from two points **3 points: \_\_\_\_\_\_\_\_\_\_**
6. from a graph -see page 235 **3 points: \_\_\_\_\_\_\_\_\_\_**
7. Classification of lines by slope-see page 237-real world examples if possible. **3 points: \_\_\_\_\_\_\_\_\_\_**
8. Finding the slope and y intercept of a line (key concept page 244) **3 points: \_\_\_\_\_\_\_\_\_\_**
9. What is slope intercept form? Show an example using numbers. **3 points: \_\_\_\_\_\_\_\_\_\_**
10. Definition of function notation including an example. **3 points: \_\_\_\_\_\_\_\_\_\_**
11. Evaluating (example 1, page 262) **3 points: \_\_\_\_\_\_\_\_\_\_**
12. Evaluating (example 2, page 262) **3 points: \_\_\_\_\_\_\_\_\_\_**
13. How to write equations in slope intercept form (concept summary page 294) **3 points: \_\_\_\_\_\_\_\_\_\_**
14. Parallel and perpendicular lines. Key concepts for both. Give two equations

that are parallel and two that are perpendicular.(see page 319) **3 points: \_\_\_\_\_\_\_\_\_\_**

1. What is a scatter plot? Show: **3 points: \_\_\_\_\_\_\_\_\_\_**
2. positive **3 points: \_\_\_\_\_\_\_\_\_\_**
3. negative **3 points: \_\_\_\_\_\_\_\_\_\_**
4. no correlation **3 points: \_\_\_\_\_\_\_\_\_\_**
5. What are the steps to find the equation of a line (linear regression) **3 points: \_\_\_\_\_\_\_\_\_\_**

on the calculator?

1. Solve and graph a multi-step inequality (example 3 page 370) **3 points: \_\_\_\_\_\_\_\_\_\_**
2. Graphing linear inequalities in two variables (concept summary page 406) **3 points: \_\_\_\_\_\_\_\_\_\_**
3. Finding the solution to a system of linear equations. (page 427) Show each:
4. solve by graphing **3 points: \_\_\_\_\_\_\_\_\_\_**
5. solve by substitution **3 points: \_\_\_\_\_\_\_\_\_\_**
6. An example showing the graph for a system of linear inequalities **3 points: \_\_\_\_\_\_\_\_\_\_**
7. Definition of an exponential function. **3 points: \_\_\_\_\_\_\_\_\_\_**
8. Definition of exponential growth including examples:
9. growth model (concept summary page 522) **3 points: \_\_\_\_\_\_\_\_\_\_**
10. equation **3 points: \_\_\_\_\_\_\_\_\_\_**
11. table **3 points: \_\_\_\_\_\_\_\_\_\_**
12. graph **3 points: \_\_\_\_\_\_\_\_\_\_**
13. Definition of exponential decay including examples:
14. decay model (concept summary page 534) **3 points: \_\_\_\_\_\_\_\_\_\_**
15. equation **3 points: \_\_\_\_\_\_\_\_\_\_**
16. table **3 points: \_\_\_\_\_\_\_\_\_\_**
17. graph **3 points: \_\_\_\_\_\_\_\_\_\_**
18. Examples of multiplying polynomials (example 1 and example 5, page 562) **3 points: \_\_\_\_\_\_\_\_\_\_**
19. Solve polynomial equations in factored form (example 1, page 575) **3 points: \_\_\_\_\_\_\_\_\_\_**
20. Factor out a common binomial (example 1, page 606) **3 points: \_\_\_\_\_\_\_\_\_\_**
21. Factor by grouping (example 2, page 606) **3 points: \_\_\_\_\_\_\_\_\_\_**
22. Factor by grouping (example 3, page 607) **3 points: \_\_\_\_\_\_\_\_\_\_**
23. Solve a polynomial equation (example 5, page 608) **3 points: \_\_\_\_\_\_\_\_\_\_**
24. Definition of a quadratic function including examples:
25. parent quadratic function (concept summary page 628) **3 points: \_\_\_\_\_\_\_\_\_\_**
26. equation **3 points: \_\_\_\_\_\_\_\_\_\_**
27. table **3 points: \_\_\_\_\_\_\_\_\_\_**
28. graph **3 points: \_\_\_\_\_\_\_\_\_\_**
29. Graph properties of a quadratic function (concept summary page 635) **3 points: \_\_\_\_\_\_\_\_\_\_**
30. What is the standard form equation for a quadratic function? **3 points: \_\_\_\_\_\_\_\_\_\_**
31. Solutions of quadratic equations (concept summary page 646) **3 points: \_\_\_\_\_\_\_\_\_\_**
32. Factor by completing the square (example 2, page 664) **3 points: \_\_\_\_\_\_\_\_\_\_**
33. What is vertex form for a quadratic function? (key concept page 669) **3 points: \_\_\_\_\_\_\_\_\_\_**
34. Methods for solving quadratic equations (concept summary page 673) **3 points: \_\_\_\_\_\_\_\_\_\_**
35. Comparing functions (key concept page 684) **3 points: \_\_\_\_\_\_\_\_\_\_**
36. An example of a box-and-whisker plot. **3 points: \_\_\_\_\_\_\_\_\_\_**
37. Go back through and make sure you have included everything mentioned above.
38. Look through the rubric and make sure you have enough done to receive the maximum amount of points. Is everything neat, done properly, definitions included, etc…

**TOTAL POINTS** $\frac{}{220}$