Algebra 2 - Unit 1 Part 1 Test Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­\_\_\_\_\_ Period\_\_\_\_Date\_\_\_\_\_\_\_

**Write the letter that best answers the question or completes the statement.**

\_\_\_\_\_1. Which of the following sets of numbers does not contain 3.75.

a. real b. rational c. irrational d. all of these.

\_\_\_\_\_2. What is the value of ?

a. 243 b. 3 c. 9 d. 140

\_\_\_\_\_3. What is the slope-intercept form of a linear equation?

a. b c. d.

\_\_\_\_\_4. What is the point-slope form of a linear equation?

a. b.

c. d.

\_\_\_\_\_5. Which property of multiplication is illustrated by the statement

a. Associative b. Commutative c. Identity d. Inverse

6. Evaluate the expression.  6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Simplify the expression:  7.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Calculate the slope of the given ordered pairs: 8.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

( 3, - 2 ) ( 4, 5 )

9. Write the equation of the graph in slope-intercept form:

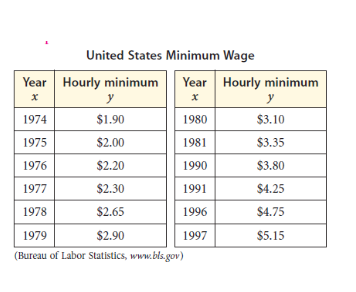
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9. Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Create a linear equation given the following information: m = ; point on the line: ( 6, 4 )

10.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. Use the following table of information (use x = 0 for year 1974):



Linear Regression Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Prediction for 2010:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Create an equation that is parallel to the given line and goes through the given point:

y = 4x + 2 ( 5, - 3 ) 12.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Create an equation that is perpendicular to the given line and goes through the given point:

y = 4x + 2 ( 8, - 3 ) 13.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve the following equations and inequalities**.

14.  14.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15.  15.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. Graph **x < - 2** on a number line. 16.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. Solve the following literal equation: 17.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A = , solve for 

**Solve and graph the following compound inequality and absolute value equations.**

18.  or  18. Solution:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Graph:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19.  19. Solution:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Graph:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. Describe in your own words the meaning of absolute value.

**BONUS (2 points each- show all work on the back)**:

1. Fund-Raising: A charity is planning to raffle off a new car donated by a local car dealer. The charity wants to raise at least $70,000. It expects to sell at least 1250 tickets and to spend $5,000 promoting the raffle. Write and solve an inequality to find the possible ticket prices, *p*.
2. Name a property of addition and multiplication. Then give an example of both addition and multiplication for the property.