**Algebra 2 Unit 1 Part 1 Quiz 2 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per\_\_\_\_**

**1. Explain the difference between rational and irrational numbers.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2. Identify the following properties: 2.**

**a.  a.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**b. b.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3. Evaluate the expression.**

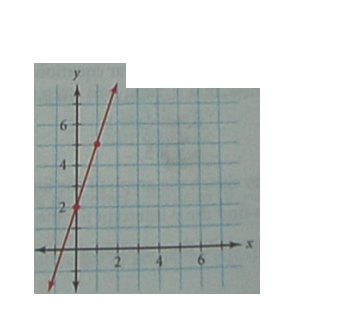
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**3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**4. Simplify:  4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**5. Simplify:  5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Simplify:  6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Write the equation of the line for the following graph.**

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**7.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8. Find the slope of the points (8, -2) and (-2, 4) 8.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**9. Does the following table represent a linear equation? (Be sure to show why.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **X** | **- 1** | **1** | **3** | **5** |
| **Y** | **5** | **6** | **7** | **8** |

**9.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10. Write an equation in slope-intercept form that contains the point (4, -3) and**

**is parallel to y = 4x + 5. 10.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

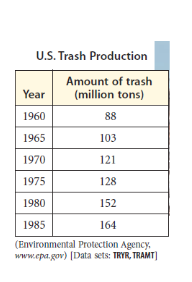
**11. Write an equation in slope-intercept form that contains the point (4, -3) and**

**is perpendicular to y = 4x + 5. 11.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**12. What is the point-slope general formula?**

**12.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**13. Use your graphing calculator to write the linear regression for the data (use 1960 as x = 0):**

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**13.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**14. Use the linear regression equation from #13 to predict the amount of trash in 2010.**

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

**15. Explain in complete sentences what could affect the previous linear regression equation and prediction.**