Algebra II – Mrs. Tilus Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 0 Review

**No Calculator is allowed on this review.**

1. Put a check mark in each box for which the number on the left of the chart belongs to the set across the top.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Integers** | **Digits** | **Rational Numbers** | **Irrational**  **Numbers** | **Natural Numbers** | **Whole Numbers** | **Real Numbers** | **Imaginary**  **Numbers** |
| 5 |  |  |  |  |  |  |  |  |
| -2/3 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

2. **Graph** each number **and** then **list** them in order from least to greatest.

5, -3, , , 0,  2. least to greatest \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6

3. Find the point 2/3 of the way from D to J. (Please state the letter or the number.)

A B C D E F G H I J K L M

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

-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6

4. a.) What is the reciprocal of 2y? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.) What is the opposite of 12? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c.) What symbol would make the following true? (12+9) + 8 \_\_\_\_\_\_\_ 12 + (9 + 8)

5. Simplify each expression.

1. (2x)(2y)(2z) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b.) 2(xyz) = \_\_\_\_\_\_\_\_\_\_\_\_\_

6. Find the value of each expression.

a.)│5 │ - │-2│ b.) 4 **∙** │-3│ c.) 5[x**∙**(-2)]

7. Identify the property used in each step.

a) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

=  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) 5 + 2(x + 1) = 5 + (2x + 2· 1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= 5 + (2x + 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= 5 + (2 + 2x) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= (5 + 2) + 2x \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= 7 + 2x substitution

8. Simplify each expression.

a.) 3 **∙** (8 + 4) **∙** 5 b.) 23 + 1

22 – 1

c.) 32 **-** 42 + 3(32 – 1) d.)

9. Evaluate the expression if x = 3, y = 4, and z = -2.

a.) 2x2 + x – 2 b.) 

10. Simplify.

a.) 5 – (2 – 9) – (4 – 11) b.) 4(3 – y) + 2(1 – y)

11. Simplify.

a.)  b.) 4(x – y) – (x – y)

c.)  d.)

13. Simplify

a.) b.)