Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_

**ALGEBRA 2 CHAPTER 1 TEST REVIEW**

**1.**Complete the table and find the **2.** Place a check for each column the number is a part of

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Number | Real | Whole | Natural | Integer | Rational | Irrational |
| 6.1π |  |  |  |  |  |  |
| -4/5 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  0 |  |  |  |  |  |  |

output when the input is *n.*

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| 1 |  | 4 |
| 2 |  | 8 |
| 3 |  | 12 |
| ... | ... | ... |
| 15 |  |  |
| ... | ... | ... |
| *n* |  |  |

**3.** Compare the two numbers. **5.** Evaluate each expression for the given values of the variable a) 2x(x – 1) – x2 for *x* = 10

Use < and >.

**a)**  -7 **b)** .3 1/3 b) (3x – 6) – (6 – 4x)for *x* = 5

**4.** Simplify by combining like terms.

**a.** 8r – 3s – 5r  **b.** 8r – (3s – 5r)

**6.** Solve the equation.

a) -4y – 5 = 12 – 8y b) -5y – 1 = -(y + 7)

**7.** Determine whether the equation is *sometimes, always,* or *never* true.

a) 1 + 5x – 6 = 6x – 5 – x b) -x + 2(5x – 1) = 2(3x + 4) + x

**8.** Solve for *x*. State any restrictions on the variables.

ax + bx – 4 = -9

**9.** Solve the inequality. Graph the solution set and write it using set notation.

a. 8 + 4*k* $\leq $ 16 b. 5(2*b* + 2) < 2 + 12*b*

**10.** Solve the compound inequality. Graph the solution set and write it using set notation.

a. 10*x* – 3 < –43 or 7*x* + 11 > –10 b. - 8 ≤ 2x – 4 < 6

**11.** Solve the absolute value equation.

 a. |2*x* + 5| = 9 b. 

**12.** Solve the absolute value inequality. Graph the solution set and write it using set notation.

 a. |4x + 3| < 5 b. |2x + 6| ≥ 10