

NAME: _____ Score _____ /10

Please **print** your name

1. The reasoning/logic used in mathematics is **deductive** reasoning.
2. How many Integers are in the interval $[-1, 4)$? **five**.
3. Use set builder notation to write the following interval. $(-2, 5] = \{x \mid -2 < x \leq 5\}$
4. Use the roster method to write the set $\{3, 9, -43, \sqrt{2}, \frac{5}{8}, \sqrt{36}\} \cap \mathbb{Q} = \{3, 9, -43, \frac{5}{8}, \sqrt{36}\}$
5. An equation is a mathematical statement which contains an **equal** symbol.
6. The set of Real Numbers consists of the union of the set of **Rational** Numbers and the set of **Irrational** numbers.
7. Two equations are **equivalent** if they have the same solution sets.
8. T **F** 2 is a solution of $x^3 + 4x^2 - x - 21 = 0$.
9. What is the solution set for $x^2 + 1 < 0$? **\emptyset**
10. Which of the following are binary relations?
 - a. addition
 - b. less than**
 - c. equal
 - d. greater than**
 - e. solving
 - f. multiplication
 - g. squaring
11. Which of the following are binary operations?
 - a. addition**
 - b. less than
 - c. equal
 - d. greater than
 - e. solving
 - f. multiplication**
 - g. squaring
12. Which of the following are unary operations?
 - a. addition
 - b. less than
 - c. equal
 - d. greater than
 - e. solving
 - f. multiplication
 - g. squaring**