

NAME: _____ Score _____/10

Please **print** your name**No Decimals No mixed numbers No complex fractions No boxed or circled answer Show Work**

1. A number (or numbers) that makes an equation true when substituted for the variable (or variables) is called a **solution** of the equation.
2. The graph of an equation consists of all the points, and only those points, whose coordinates are **solutions** of the equation.
3. A **simplest** equation is an equation which has a single variable on one side of the equal sign and a single number on the other side.
4. If both sides of an equation are multiplied by the same non-zero real number, the resulting equation is **equivalent** to the original equation.
5. The process to solve a linear equation in one variable is to generate a sequence of equations each **equivalent** to the previous equation until a simplest equation is obtained.
6. Write the interval $[-4, 5)$ in set builder notation.

$$[-4, 5) = \{x \mid -4 \leq x < 5\}$$

7. Sketch the graph of $(-5, 296)$
- 8.

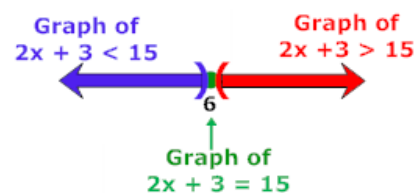


9. (3 pts) Sketch the graph of $2x + 3 = 15$, $2x + 3 < 15$, and $2x + 3 > 15$ on the same real number line. Be sure to label everything important.

$$2x + 3 = 15$$

$$2x = 12$$

$$x = 6$$



**Test 0 in $2x + 3 < 15$
to obtain $3 < 15$
which is true.**

**So $(-\infty, 6)$ is the solution
set for $2x + 3 < 15$.**

**By The Law of Trichotomy
 $(6, \infty)$ is the solution set for
 $2x + 3 > 15$**