Meramec Math 160C Quiz 2A Solution Fall 2014

NAME: _____Score_____/10

Please **print** your name

No Decimals No mixed numbers No complex fractions No boxed or circled answer Show Work

1. The collection of all solutions of an equation is called the **solution set** of the equation.
2. Two equations are **equivalent** if they have the same solution sets.
3. If any expression is added to both sides of an equation the resulting equation is **equivalent** to the original equation.
4. A linear equation in one variable is an equation that can be written in the form **ax + b = 0** where a and b are real numbers with not both a and b equal to zero.
5. The graph of an inequality consists of all the points, and only those points, whose coordinates are **solutions** of the inequality.
6. Write the interval [3, 7) in set builder notation.

$$[3,7) = \{x \mid 3 \le x < 7\}$$

7. Sketch the graph of (24, 65)

8. (3 pts)Sketch the graph of 2x – 3 = 9, 2x – 3 < 9, and 2x – 3 > 9 on the same real number line. Be sure to label everything important.

2x – 3 = 9
2x = 12
x = 6

Test 0 in 2x – 3 < 9 to obtain -3 < 9 which is true. So (- ∞, 6) is the solution set for 2x – 3 < 9. By The Law of Trichotomy (6, ∞) is the solution set for 2x – 3 > 9