

**Intermediate Algebra    Quiz 4    Summer 2010**

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10

Please **print** your name

1. T    F    If both sides of an inequality are multiplied by the same negative real number and the inequality symbol is reversed, the resulting inequality is equivalent to the original inequality.
2. T    F    A **linear inequality** in one variable  $x$  is an inequality which can be written in the form  $ax + b = 0$ .
3. T    F    If  $a$  and  $b$  are real numbers and  $ab = 0$ , then it is possible that  $a > 0$  and  $b < 0$ .
4. T    F    In all of mathematics, **division** is defined by a conversion to multiplication
5. The \_\_\_\_\_ of an equation consists of all the points, and only those points, whose coordinates are solutions of the equation.
6. If any expression is added to both sides of an equation the resulting equation is \_\_\_\_\_ to the original equation.
7. If both sides of an equation are multiplied by the same \_\_\_\_\_ real number, the resulting equation is equivalent to the original equation.
8. The formula for the area of a circle with radius  $r$  is: \_\_\_\_\_. (Remember a formula must be an equation)
9. The length of the sides of a square is  $\sqrt{43}$ . What is the area of the square? \_\_\_\_\_.
10. Complete this statement of the transitive property for equality. If  $a$ ,  $b$ , and  $c$  are real numbers such that  $a = b$  and  $b = c$ , then \_\_\_\_\_.