

NAME: _____ Score _____/10

Please **print** your name

1. **T** F The interval $[4, 8]$ contains both 4 and 8.
2. T **F** $(4, \infty]$ is acceptable interval notation.
3. T **F** Every equation has a solution.
4. **T** F Every conditional equation has a solution.
5. **T** F Every integer is a rational number.
6. T **F** If both sides of an equation are multiplied by the same expression, the resulting equation is equivalent to the original equation.
7. **T** F Two equations are equivalent if they have the same solution sets.
8. The collection of all solutions of an equation is called the **solution set** of the equation.
9. If a and b are real numbers, then one and only one of the following is true:
 - i. **$a < b$**
 - ii. **$a = b$**
 - iii. **$a > b$**
10. Calculate the midpoint of the line segment joining $(3, 5)$ and $(1, 7)$. Remember: If you intend to use a formula state it first.

Use the midpoint formula: *midpoint is* $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$ to obtain

$$\text{midpoint is } \left(\frac{3+1}{2}, \frac{5+7}{2}\right) = \left(\frac{4}{2}, \frac{12}{2}\right) = (2, 6)$$