Math 2283 - Introduction to Logic

Quiz #10 **- 2015.10.09**

Name: _____

Let $\bigvee$ be the set of all real numbers, and define the following relations:

$$xRy \longleftrightarrow x \cdot y \geq 0, \quad xSy \longleftrightarrow x - y \geq 0, \qquad xTy \longleftrightarrow x - y > 0$$

1. Which of the relations R, S, and T are reflexive?

2. Which of the relations R, S, and T are transitive?

3. Which of the relations R, S, and T are symmetric?

4. Which of the relations R, S, and T are asymmetric?

5. Which of the relations R, S, and T are connected?