

Math 2283 - Introduction to Logic

Quiz #2 - 2015.08.28

Name: _____

1. Determine if the following quantified statements are true or false.

(a) $\exists x \forall y x \leq y$

(b) $\exists x \forall y x \geq y$

(c) $\forall x, y \exists z$ If $x \neq y$, then $x < z < y$

2. Repeat problem 1, only this time, let the universe of discourse be the whole numbers $\mathbb{W} = \{0, 1, 2, 3, \dots\}$. Determine if the following quantified statements are true or false.

(a) $\exists x \forall y x \leq y$

(b) $\exists x \forall y x \geq y$

(c) $\forall x, y \exists z$ If $x \neq y$, then $x < z < y$