

Math 2283 - Introduction to Logic

Quiz #23 - 2016.03.11 Solutions

1. State the definition of a relation R being irreflexive.

$$R \text{ is irreflexive} \stackrel{\text{def}}{\iff} \forall x \in K (\sim xRx)$$

2. State the definition of a relation R being connected.

$$R \text{ is connected} \stackrel{\text{def}}{\iff} \forall x, y \in K (\sim (x = y) \rightarrow (xRy \vee yRx))$$

3. State the definition of the converse relation to a relation R .

$$x\check{R}y \stackrel{\text{def}}{\iff} yRx$$

4. State the definition of the relative product of two relations R and S .

$$xR/Sy \stackrel{\text{def}}{\iff} \exists z (xRz \wedge zSy)$$