

Property	Definition
Reflexivity	$\forall a \ r(a, a)$
Irreflexivity	$\forall a \ \neg r(a, a)$
Symmetry	$\forall a \forall b \ r(a, b) \Rightarrow r(b, a)$
Antisymmetry	$\forall a \forall b \ r(a, b) \wedge r(b, a) \Rightarrow a = b$
Transitivity	$\forall a \forall b \forall c \ r(a, b) \wedge r(b, c) \Rightarrow r(a, c)$