

Equivalence Relation

A special type of binary relation, called an *equivalence relation*, captures the notion of two objects being equal in some feature. A binary relation R is an equivalence relation if R satisfies three conditions:

1. R is *reflexive* if for every x , xRx ;
2. R is *symmetric* if for every x and y , xRy implies yRx ; and
3. R is *transitive* if for every x , y , and z , xRy and yRz implies xRz .