

Binary relations

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Contents

'utils require import

- Required module: [utils](#)

Given two types A and B , a binary relation between A and B can be described as a function that, when given two witnesses a and b produces a *Set0* which is inhabited iff a and b are related.

'Relation Type ? ? def ! !

Type 'A -> Relation (A A) 'r ->

'reflexive A 'a -> r (a a) ? def

'symmetric A 'x -> A 'y -> r (x y) 'rxy -> r (y x) ? ? ? def

'transitive A 'x -> A 'y -> A 'z -> r (x y) 'rxy -> r (y z) 'ryz -> r (x z) ? ? ? ?
! !