Functions and Relations

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Definition 1: [function]/
relation

Decide whether functions or relations are the base objects.

Definition 2: [set]/
function

A function is a

Definition 3: [set, relation]/
set_is_relation_transitive

Consider

- Set S
- Relation $R \subseteq S^2$

S is said to be R transitive (or just transitive) iff:

$$\forall_{yRxRX} yRX \tag{1}$$

i.e.:

$$y \longrightarrow x \dashrightarrow X$$

Definition 4: [set]/
transitive_set

Consider

- Set S

S is said to be transitive iff S is ϵ transitive. Equivalently:

$$\in_S = \subseteq_S \tag{2}$$
$$S \subseteq \mathcal{P}(S) \tag{3}$$