0.1 Relations and equality

0.1.1 Relations

A special type of predicates is a relation. These take two terms and can be written differently: $P(x, y) \Leftrightarrow x \oplus y$

0.1.2 Equality

In preterite logic we define the relation for equality.

$a = b$

It is defined by the following:

- Reflexivity : $x = x$
- Symmetry: $x = y \leftrightarrow y = x$
- Transivity: $x = y \wedge y = z \rightarrow x = z$
- Substitution for functions: $x = y \rightarrow f(x) = f(y)$
- Substitution for formulae: $x = y \wedge P(x) \rightarrow P(y)$