

Equality Operators

Example 1 : Basic Equality

The equality operator compares values:

$$x = y$$

$$x \neq y$$

Example 2 : Equality elem Predicates

Equality is commonly used in quantified predicates:

$$\forall x : \mathbb{N} \bullet x = x$$

$$\exists y : \mathbb{Z} \bullet y = 0$$

Example 3 : Equality elem Set Comprehension

Using equality to define sets:

$$\{ z : \mathbb{Z} \mid z = 10 \}$$

$$\{ n : \mathbb{N} \mid n = n \}$$

Example 4 : Equality with Expressions

Equality can compare complex expressions:

$$\forall x, y : \mathbb{N} \bullet x + y = y + x$$

$$\exists a, b : \mathbb{Z} \bullet a * b = 0$$