0.1 Set-builder notation

0.1.1 Notation

NB. This should be later, the way they are described links to the axiom schema of specification.

We can use short-hand to describe sets.

$\{x \in S : P(x)\}$

This defines a set by a restriction. For example we will later be able to define natural numbers above 5 as:

$\{x \in \mathbb{N} : x > 5\}$

0.1.2 Class builder notation

Emuneration can be done through set builder notation too

Can define sets formally! defintion doesn't just affect sets

$\forall x(x \in C \leftrightarrow P(x))$

NB: We're not saying C exists

Can then use examples of equiv class

$\forall x(x \in C \leftrightarrow x = x)$