1   Set

A *set* is a collection of things, called its members or elements.

We write $x = y$ to mean that x and y are the same object. If $A = B$, then for any object t it is automatically true that $t \in A$ *iff* $t \in B$. This holds simply because A and B are the same thing.

1.1   Principle of Extensionality

If A and B are sets such that for every object t,

$$t \in A \quad \text{iff} \quad t \in B,$$

then $A = B$. This reflects the idea of what a set is; **a set is determined just by its members.**