



## Finite Sets

### 1 Why

### 2 Definition

We want to talk about the size of a set. A *finite* set is one that is equivalent to some natural number; an infinite set is one which is not finite.

**Proposition 1.** *A set can be equivalent to at most one natural number.*

The *number* of a finite set is the unique natural number equivalent to it. We also call this the *size* of the set.

#### 2.1 Notation

We denote the number of a set by  $|A|$ .

### 3 Properties

**Proposition 2.**  $A \subset B \implies |A| \leq |B|$

