



# Identity

## 1 Why

We can give the same object two different names, but it is still one object.

## 2 Definition

An object *is* itself. If the object that two names refer to is the same, then we say that the first name *equals* the second name.

### 2.1 Notation

We denote that the object named  $a$  and the object named  $b$  refer to the same object by  $a = b$ , read aloud as: "a is b." We denote that the object  $a$  and  $b$  refer to different objects by  $a \neq b$ , read aloud as: "a is not b."

We may also read the notation  $a = b$  aloud as "a equals b". Other English readings include: "a is the same as b", "a is equivalent to b", "a refers to the same object as b."