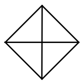


Why

We want symbols to represent identity and belonging.

Definition

In the English language, *nouns* are words that name people, places and things. In these sheets, *names* (see *Names*) serve the role of nouns. In the English language, *verbs* are words which talk about actions or relations. In these sheets, we use the verbs "is" and "belongs" for the objects discussed. And we exclusively use the present tense. A *statement* is several symbols.

Experience shows that we can avoid the English language and use symbols for verbs. By doing this, we introduce odd new shapes and forms to which we can give specific meanings. As we use italics for names to remind us that the symbol is denoting a possibly intangible arbitrary object, we use new symbols for verbs to remind us that we are using particular verbs, in a particular sense, with a particular tense.

Identity

As an example, consider the symbol $=$. Let a denote an object and b denote an object. Let us suppose that these two objects are the same object in the set of the sheet *Identity*. We agree that $=$ means "is" in this sense. Then we write $a = b$. It's an odd series of symbols, but a series of symbols nonetheless. And if we read it aloud, we would read a as "the object denoted by a", then $=$ as "is", then b as "the object denoted by b". Altogether then, "the object denoted by a is the object denoted by b." We might box these three symbols $\boxed{a \sim b}$ to make clear that they are meant to be read together, but experience shows that (as with English sentences and words) we do not need boxes.

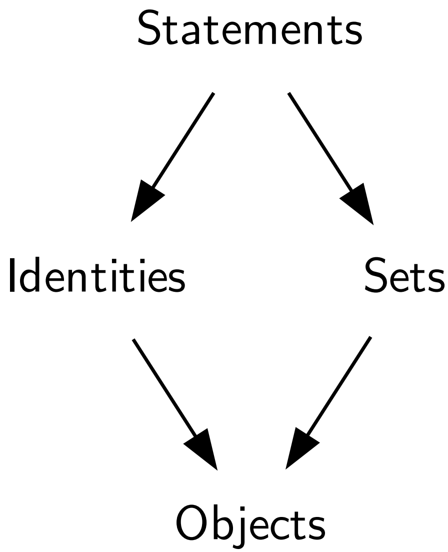
The symbol $=$ is (appropriately) a symmetric symbol. If we flip it left and right, it is the same symbol. This reflects the symmetry of the English sentences represented. $A = B$ means the same as $B = A$.

ßBelonging

As a second example, consider the symbol $\in$. Let a denote an object and let A denote a set. Let us suppose that the object denoted by a belongs to the set denoted by A. We agree that $\in$ means "belongs to" in the sense of "is an element of" or "is a member of" as given in *Sets*. Then we write $a \in A$. We read these symbols as "the object denoted by a belongs to the set denoted by A".[1]

The symbol $\in$ is not symmetric. If we flip it left and right it looks different. And as we discussed in *Sets*, $a \in A$ does not the mean the same as $A \in a$.

[1]The symbol $\in$ is a stylized lower case Greek letter ε, which is a mnemonic for the ancient Greek word ἐστί which means, roughly, "belongs". Since in English, ε is read aloud "ehp-sih-lawn," $\in$ is also a mnemonic for "element of".


Statements
Identities
Sets
Objects