



## NAMES

### Why

We (still) want to talk and write about things.

### Names

As we use sounds to speak about objects, we use symbols to write about objects. In these sheets, we will mostly use the upper and lower case latin letters to denote objects. We sometimes also use an accent ' or subscripts or superscripts. When we write the symbol, we say that it *denotes* the object. We call the symbols the *name* of the object.

Since we use these same symbols for spoken words of the English language, we want to distinguish names from words. One idea is to box our names, and agree that everything in a box is a name, and that a name always denotes the object. For example,  $\boxed{A}$  or  $\boxed{A'}$ . The box works well to group in the accent, and also clarifies that  $\boxed{A}\boxed{A}$  is different from  $\boxed{AA}$ . But experience shows that the boxes are mostly unnecessary.

We indicate a name for an object with italics. Instead of  $\boxed{A'}$  we use  $A'$ . Experience shows that this subtlety is enough for clarity, and it agrees with traditional and modern practice.

### No repetitions

We will also agree that we will never use the same name to refer to two different objects. It is in the nature of things—

and of names in particular—that we can not do this without confusion.

### **Names are objects**

There is an odd aspect in these considerations.  $A$  may denote itself, that particular mark on the page. There is no helping it. As soon as we use some symbols to identify any object, these symbols can references themselves.

An interpretation of this peculiarity is that names are objects. In other words, the name is an abstract object, it is that which we use to refer to another object. It is the thing pointing to another object. And the several marks on the page, all of which are meant to look similar, which are meant to denote the object, are uses of the name.

### **Placeholders**

We frequently use a name as a *placeholder*. In this case, we will say “let  $A$  denote an object”. By this we mean that  $A$  is a name for an object, but we do not know what that object is. This is frequently useful when the arguments we will make do not depend upon the particular object considered. This practice is also old. Experience shows it is effective. As usual, it is best understood by example.

Names



Objects