

Set Notation

$$A = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$$

The order in which the elements are listed does not matter.

We use the symbol \in to show an element belongs to a set or is a member of that set. For example $2 \in A$. To show an element does not belong to a set, we use the same symbol with a line through it; \notin . Piece of cake, don't you think?

Sometimes making a complete listing of the elements of a set might not be warranted because of the sheer number of elements. In that case, we develop more notation. In those cases we use something called **set builder notation**. Using set builder notation to describe single digit numbers would look like this:

$$A = \{x / x \text{ is single digit number}\}$$

The way you say that is “A” is the set of all elements x such that x is a single digit number. The first “ x ” inside the brackets just identifies the variable be used to describe the elements. The “/” is read “such that”.