

## Nematrian Website Pages on Set Manipulation

[Nematrian website page: [SetManipulationIntro](#), © Nematrian 2015]

The mathematical notion of a set involves no duplication, so that if we have a series containing 4 elements, "a", "a", "c" and "b", the set formed by the members of this series contains three members, namely "a", "c" and "b".

There is no distinction between the set {"a", "c", "b"} and the set {"a", "b", "c"} - the relationship between a set and its members merely boils down to whether an object is or is not a member of the set. However, it is often convenient to present a set having ordered its members, so many of the Nematrian website's web functions relating to sets have a variant that sorts the member elements, see [SetManipulationFunctions](#).

Sets play an important conceptual role in mathematics, and can involve sets of sets as well as sets of more basic objects. The Nematrian website's functions are currently more limited in their scope and merely manipulate sets of predefined object types, principally Bytes, Dates, Doubles (i.e. numerical values), Integers, Booleans (i.e. variables that can be 'true' or 'false') and Strings.

The **union** of two sets  $A \cup B$  is the set containing all elements of either of the two original sets. The **intersection** of two sets  $A \cap B$  is the set containing the elements that are in both of the original sets. So, if set A was {"a", "b", "c"} and set B was {"a", "c", "e"} then  $A \cup B$  is {"a", "b", "c", "e"} and  $A \cap B$  is {"a", "c"}.