The meaning of set?

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Hi All,

The meaning of sets and set membership:

Sets can be intuitively thought of as conceptual containers having clear cut inclusion and exclusion rules.

A container is what has the ability to contain some of what is other than itself. The ability to contain is not determined by the existence of contents within the container. The ability to contain is a de novo property of the container itself.

Intuitively speaking one can say that what makes a container able to contain others is the concept of "closure". For example this can be shown well in geometric figures.
Geometric figures that can contain things within them should be closed figures, open figures cannot contain things within them.

This closure is what makes a geometric figure able to contain other geometric figures inside it.

However in the conceptual world, a concept is said to have closure if it can hold a clear cut meaning, i.e. Dichotomous, in such a manner that other concepts can be related to it in a clear cut manner.

More rigorously speaking closure is having a clear cut inclusion\ exclusion rules.

Inclusion rule to a container is the requirement for being contained within it.
Exclusion rule of a container is the requirement for being not contained within it.

Such containers if specified by their contents are called sets.

Set membership is the inclusion rule to the set.

A is a member of B mean that A fulfils the requirements of inclusion into B.

So a member of a set is what fulfils the requirements of inclusion into that set.

Simply speaking a member of a set is what fulfils its membership.

The Principle of conditional generality:

For every set there is a set which specifically has it as its only member, and every
member of a set is a set of some other sets, unless sets are defined in such a manner as to make this rule logically contradictive. .

From these simple intuitive ideas one can understand all axioms of set

theory.

1) Extentiality and the empty set are very clearly derived from the meaning of sets.
2) Pairing: can be simply derived from the principle of conditional generality as below.

If x is a set and y is a set, then the container which specifically contains them as its sole members is by definition a set since it is a conceptual container having closure
As defined by a clear cut set membership/exclusion rule.

3) Union, separation, replacement, infinity, choice, power set. All can simply be derived from the meaning of sets mentioned above as far as they involve no logical contradiction.

4) The axiom of regularity is inherit in the meaning of sets as conceptual containers of others.

The set of all sets exist, but the set which contain it as a member doesn't exist, nor does a proper superset of it exist, neither a power set.

Though axioms in ZFC are rigorously followed in a blind manner, yet giving flexibility to them so that they are only applicable within in the confines of logic, is a better and a more reasonable approach.

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