

## Set-Theoretic Property: *atis*Group

(*Set-theoretic properties* are those properties that are part of the meta-theory and have been abducted from set theory to be used as a tool to provide solutions concerning the theory. Those solutions may be assigned as values to components or relations of the theory and thereby become part of the theory.)

**Group**,  $\mathcal{G}_o$ , =<sub>df</sub> a set with at least two components within the universe of discourse.

$$\mathcal{G}_o =_{df} \{x \mid x \in \mathcal{W} \subset \mathcal{U} \wedge |\mathcal{W}| > 1\} = \mathcal{S}_o$$

**Group** is a set of components; such that, the components are in a subset of the universe and the cardinality of the subset is greater than one. While this definition provides the initial definition of group, in practice we will be concerned with groups with respect to a specific system. ‘ $\mathcal{S}_o$ ’ will designate the object-sets of a system. That is, in general,  $\mathcal{G}_o = \mathcal{S}_o$ .