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0.1 Subset relation

0.1.1 Subset

If all terms which are members of term x are also members of term y , then x is a subset of y .

$$\forall x \forall y [(\forall z (z \in x \rightarrow z \in y)) \leftrightarrow (x \subseteq y)]$$

0.1.2 Proper subset

If two sets are equal, then each is a subset of the other. A proper subset is one which is a subset, and not equal to the other set.

$$\forall x \forall y [((\forall z (z \in x \rightarrow z \in y)) \wedge (x \neq y)) \leftrightarrow (x \subset y)]$$