

Syntax and Semantics Concerning Power Sets

written by Nada Ali on Functor Network

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Let S be an arbitrary set and $P(S)$ be the power set of S . Then, when we say consider a subset E of $P(S)$, do we mean it syntactically or semantically? In other words, do we mean E is a subset of $P(S)$ and so is a collection of subsets of S , or do we mean E is a subset of $P(S)$ and so is just one single element of $P(S)$ as all elements of $P(S)$ are originally subsets of S ?