Why

We speak of a *set* and a subset of its power set which satisfies certain properties. The utility of this abstract concept is proved by its examples, in future sheets.

Definition

A *subset system* is a a pair of sets: the second set contains subsets of the first.

We call the first *set*set the *base set.* We call elements of the second set *distinguished subsets.* An *undistingished subset* is a subset of the first set which is not *distinguished.*

Notation

Let A be a set and $\mathcal{A} \subset A^*$. We denote the subset system of A and $\mathcal{A}$ by $(A, \mathcal{A})$, read aloud as "A, script A."

Example

Example 1. *Let A be a nonempty set. Let $\mathcal{A}$ be A^*. Then $(A, \mathcal{A})$ is a subset system.*

Subset Systems

Set Powers

Ordered Pairs

Unordered Triples

Pair Unions

Set Unions

Unordered Pairs

Empty Set

Set Specification

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Identities

Sets

Names

Letters

Objects