



Subset Systems

1 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.

2 Definition

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

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

2.1 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.”

3 Example

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