

The power set of a set

If A is a set, then the set of all subsets of A is called the **power set** of A and is denoted by $P(A)$.

Example:

Let $A = \{1, 2, 3\}$, then

$$P(A) = \{ \emptyset, \{1\}, \{2\}, \{3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}, \{1, 2, 3\} \}$$