



Why

We consider elements of one set which are not contained in another set.

Definition

Let A and B denote sets. The *difference* between A and B is the set $\{x \in A \mid x \notin B\}$. In other words, the difference between A and B is the set of all points of A which do not belong to B .

It is not necessary that $B \subset A$; the difference is called *proper* if $A \supset B$. This terminology is from that of **proper subsets**.

Notation

We denote the difference between A and B by $A - B$. Some authors use $-$ or \sim , but we will avoid this.

Properties

The following are straightforward.¹

Proposition 1. $A - \emptyset = A$

Proposition 2. $A - A = \emptyset$

¹Accounts will appear in future editions.

