

if, $A = B \rightarrow A \subseteq B$ and $B \subseteq A$

* Proper subset :-

When A is a subset of B for example, then set A is not equal to B .

Ex: $\{ \text{Jane, Mary} \} \neq F$
 $\{ \text{Jane, Mary} \} \subset F$
 \uparrow
proper set

$\therefore A \subset B \rightarrow A \subseteq B$
but $A \neq B$

Ex: $\{ \text{Jane} \} \subset F \rightarrow \text{TRUE}$
 $\{ \text{Jane} \} \in F \rightarrow \text{FALSE}$
 $\text{Jane} \in F \rightarrow \text{TRUE}$
 $\text{Jane} \notin F \rightarrow \text{TRUE}$

** $\in, \neq, =, \subset, \subseteq \rightarrow$ returns
"TRUE"/"FALSE" results and
are described as predicate
functions.

Ex: $\in (\text{Jane}, F) = \text{TRUE}$