

Symbols

\in = belongs to

\notin = not belongs to

\subset = proper subset

$\not\subset$ = not proper subset

\subseteq = subset

| A | B | A | B |
|---|-----------------|---|--------------------|
| 1 | \in {1, 2, 3} | 1 | \notin {1, 2, 3} |
| 2 | \in {1, 2, 3} | 2 | \notin {1, 2, 3} |
| 3 | \in {1, 2, 3} | 3 | \notin {1, 2, 3} |

But $\{1, 2\} \notin \{1, 2, 3\}$
 $\{2, 3\} \notin \{1, 2, 3\}$

$\{1, 2\} \in \{\{1, 2\}, 3\}$
 $\{2, 3\} \in \{1, \{2, 3\}\}$

$\{1, 2\} \subset \{1, 2, 3\}$
 $\{2, 3\} \subset \{1, 2, 3\}$

~~but~~ $\{1, 2, 3\} \not\subset \{1, 2, 3\}$
but $\{1, 2, 3\} \subseteq \{1, 2, 3\}$