

Ex: $2^A = \{ B : B \subseteq A \}$

let, $A = \{ 1, 2, 3 \}$ → 3 digit binary

then,

$2^A = \{ \phi, \{1\}, \{2\}, \{3\}, \{1, 2\}, \{2, 3\}, \{1, 3\}, A \}$

→ empty set

$\therefore 2^A$ is defined to be the set B such that B is a subset of A .

* Size of a set (cardinality) :-

$|A| = 3$

absolute value sign

$|A|$ = number of elements of set

Ex: $|2^A| = 8$

$|F \cup M| = |F| + |M|$
 $= 7 \neq 4 + 4$

x ——— x ——— x ———