IMLPICATIONS

-> is a statement of the form

if **P** is true, then **Q** is true

exs:

- Math : if n is an even integer, then n^2 is an even integer
- Set Theory : if $A \subseteq B$ and $B \subseteq A$, then $A = B$.
- Queen Bey : If you like it, then you should put a ring on it

For any x, if P(x) is true, then Q(x) is true

Means that anytime you find an object x where P(x) is true, you will see that Q(x) is also true (for that same x).

NO CAUSATION HERE, it simply means that if you find that P(x) is true, you will find that Q(x) is also true.

NEGATIONS

-> is a statement that is either true or false.

The negation of the *(***universal**} statement

a.**Every P is a Q**.

b. **For all x, P(x) is true**.

The negation of the **existential** statement

c. **There exists a P that is a Q**

is the existenttial statement

a.**THere is a P that is not a Q**.

b. **There exists an x where P(x) is false**.

is the universal statement.

c. **Every P is not a Q**