<https://byjus.com/maths/math-symbols/>

1) ∀ for all

|  |  |  |  |
| --- | --- | --- | --- |
| **∀** | for all | Universal Quantifier | 2n is even ∀ n ∈ **N**  where**N**is a set of Natural Numbers |

2) **∈**

|  |  |  |  |
| --- | --- | --- | --- |
| **∈** | Belong to/is an element of or in the | Set membership | A = {1, 2, 3} 2 ∈ A |

3) **∃**

|  |  |  |  |
| --- | --- | --- | --- |
| **∃** | there exists or do exists | Existential quantifier | b is divisible by a, then ∃ n ∈ **N** such that b = na |

4) N

|  |  |  |  |
| --- | --- | --- | --- |
| N | Natural Numbers |  | N={0,1,2,…n} |

4) N+ - without 0

|  |  |  |  |
| --- | --- | --- | --- |
| N+ | Positive Natural Numbers |  | N={1,2,…n} |

5)

|  |  |  |  |
| --- | --- | --- | --- |
| **⇒** | implies | Implication | p: a number is a multiple of 4  q: the number is even  p ⇒ q |

6)

|  |  |  |  |
| --- | --- | --- | --- |
| **↔** | equivalent | if and only if (iff) | p: x is an even number  q: x is divisible by 2  p ↔ q |

7)

|  |  |  |  |
| --- | --- | --- | --- |
| **¬** | not | not – negation | ¬ x |

8) if a is even it can be written as : (2 | a )

9) And symbol

|  |  |  |  |
| --- | --- | --- | --- |
| **^** | caret / circumflex | and | x ^ y |
| **·** | and | and | x · y |
| **&** | ampersand | and | x & y |

10)