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### Ans - 1      NAND Gate

A NAND Gate is a logic gate that performs the reverse operation of an AND logic gate.

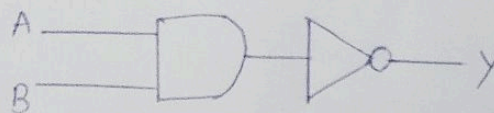
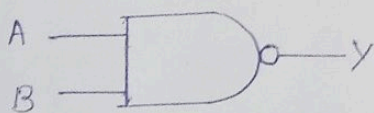
The NAND gate is AND gate succeeded by NOT gate.

Thus one can understand the NAND gate as NOT-AND gate also.

A NAND gate constitutes one or more inputs with a single output.

The NAND gate has an output that is normally at logic high and only goes to logic low when all of its inputs are at logic high.

NAND Gate Symbol



## NAND Gate Truth table

Below is NAND gate boolean expression for two inputs.

$$Y = \overline{A \cdot B} = \bar{A} + \bar{B}$$

Truth table for two-input NAND gate

INPUT		OUTPUT
0	0	1
0	1	1
1	0	0
1	1	0

Truth table for three-input NAND gate

INPUT			OUTPUT
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0



# NAND Gate Circuit Diagram

