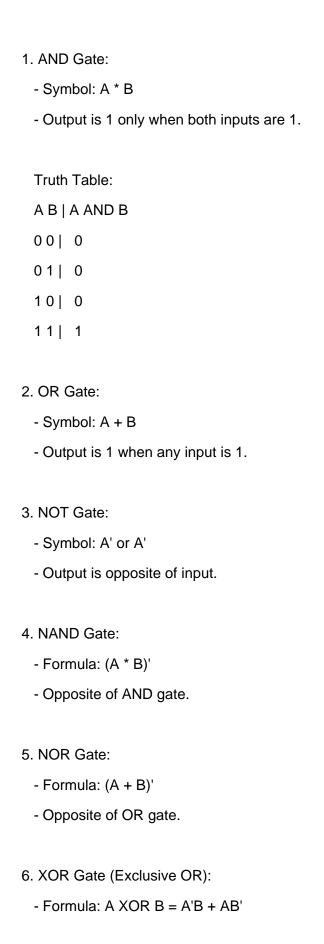
Logic Gates: Explanation, Conversion & Formulas

Logic Gates Concepts & Formulas



Logic Gates: Explanation, Conversion & Formulas

- Output is 1 when inputs are different.

7. XNOR Gate (Exclusive NOR):

- Formula: A XOR B' = AB + A'B'
- Output is 1 when inputs are same.

Gate Conversion Using NAND:

- NOT: A NAND A = A'
- AND: (A NAND B)' = A * B
- OR: A OR B = (A' * B')'

Gate Conversion Using NOR:

- NOT: A NOR A = A'
- OR: (A NOR B)' = A + B
- AND: A AND B = (A' + B')'

Boolean Algebra Laws:

- Identity: A + 0 = A, A * 1 = A
- Null: A + 1 = 1, A * 0 = 0
- Inverse: A + A' = 1, A * A' = 0
- De Morgan's: (AB)' = A' + B', (A + B)' = A' * B'