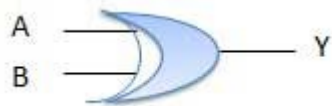


XOR Gate

XOR or Ex-OR gate is a special type of gate. It can be used in the half adder, full adder and subtractor. The exclusive-OR gate is abbreviated as EX-OR gate or sometime as X-OR gate. It has n input ($n \geq 2$) and one output.

$$\begin{aligned} Y &= A \text{ XOR } B \text{ XOR } C \dots\dots N \\ Y &= A \oplus B \oplus C \dots\dots N \\ Y &= \overline{AB} + \overline{AB} \end{aligned}$$

Logic diagram



Truth Table

Inputs		Output
A	B	$A \oplus B$
0	0	0
0	1	1
1	0	1
1	1	0