|  |  |  |  |
| --- | --- | --- | --- |
| Symbol | Truth Table | | |
| 2-input AND Gate | B | A | Q |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |
| Boolean Expression **Q = A.B** | Read as A **AND** B gives Q | | |

Both A and B have to be one for Q to be 1.

A\*B=Q

|  |  |  |  |
| --- | --- | --- | --- |
| Symbol | Truth Table | | |
| 2-input OR Gate | B | A | Q |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |
| Boolean Expression **Q = A+B** | Read as A **OR** B gives Q | | |

When A = 1 and B = 1 they enter the interim as a 1. Once they pass through the

Inversion circle the number becomes 0.

\_\_\_

A\*B=Q

|  |  |  |  |
| --- | --- | --- | --- |
| Symbol | Truth Table | | |
| 2-input NOR Gate | B | A | Q |
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 0 |
| Boolean Expression **Q = A+B** | Read as A **OR** B gives **NOT** Q | | |

When A = 1 and B = 0 enter the interim (where the shape connects to the circle) they are 0 , once they pass through the inversion circle the number changes to 1.

\_\_\_

A+B=Q