

Logic Gate Puzzle

① a)  $A \text{ AND } B \Rightarrow 1 \cdot 0 = 0$

b)  $A \text{ OR } B \Rightarrow 1 + 0 = 1$

c)  $A \text{ XOR } B \Rightarrow 1 \oplus 1 = 0$   
 $1 \oplus 0 = 1$

d)  $\text{Not } A \Rightarrow A = 1$

$\sim A = -1$

Truth Table

| A | B | A AND B | A OR B | A XOR B | Not A |
|---|---|---------|--------|---------|-------|
| 0 | 0 | 0       | 0      | 0       | 1     |
| 0 | 1 | 0       | 1      | 1       | 1     |
| 1 | 0 | 0       | 1      | 1       | 0     |
| 1 | 1 | 1       | 1      | 0       | 0     |