

Logic Gate Cards — Print and Cut

GATE RULE CARDS (Laminate if possible)

AND GATE

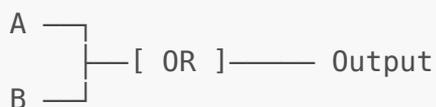


Rule: Output = TRUE **only if BOTH** inputs are TRUE.

Input A	Input B	Output
TRUE	TRUE	TRUE
TRUE	FALSE	FALSE
FALSE	TRUE	FALSE
FALSE	FALSE	FALSE

Memory: AND is strict — everyone must qualify.

OR GATE



Rule: Output = TRUE if **AT LEAST ONE** input is TRUE.

Input A	Input B	Output
TRUE	TRUE	TRUE
TRUE	FALSE	TRUE
FALSE	TRUE	TRUE
FALSE	FALSE	FALSE

Memory: OR is generous — anyone can qualify.

NOT GATE

A —[NOT]——— Output

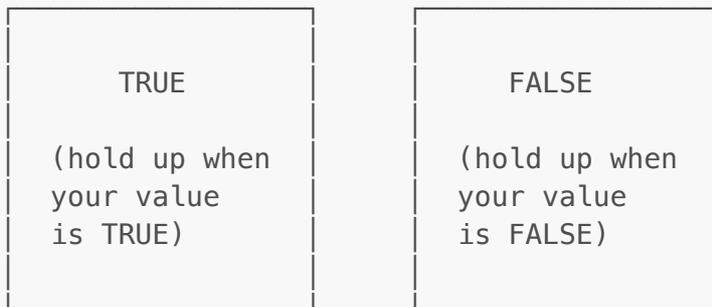
Rule: Output = the **OPPOSITE** of the input.

Input A	Output
TRUE	FALSE
FALSE	TRUE

Memory: NOT flips the value.

TRUE / FALSE HAND CARDS

Print 16 copies of each. Cut out. Use during the physical activity.



Practice Chains

Chain 1: A → [NOT] → AND with B

- A=TRUE, B=FALSE: NOT(TRUE)=FALSE → FALSE AND FALSE = **FALSE**
- A=FALSE, B=TRUE: NOT(FALSE)=TRUE → TRUE AND TRUE = **TRUE**

Chain 2: A OR B → [NOT]

- A=FALSE, B=FALSE: FALSE OR FALSE=FALSE → NOT(FALSE) = **TRUE**
- A=TRUE, B=FALSE: TRUE OR FALSE=TRUE → NOT(TRUE) = **FALSE**

Chain 3: (A AND B) OR C

- A=TRUE, B=FALSE, C=TRUE: (TRUE AND FALSE)=FALSE → FALSE OR TRUE = **TRUE**
- A=FALSE, B=FALSE, C=FALSE: FALSE AND FALSE=FALSE → FALSE OR FALSE = **FALSE**