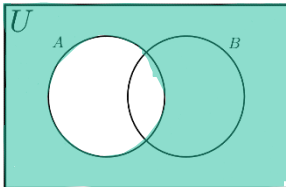

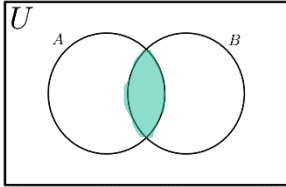

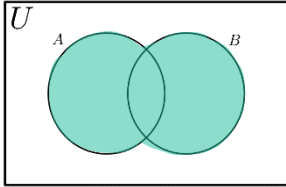

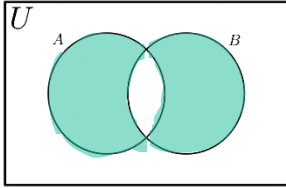

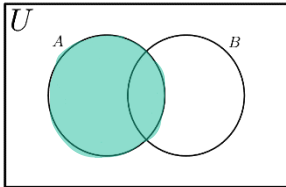

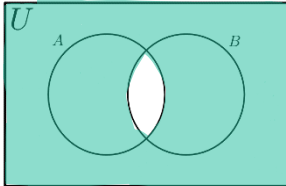

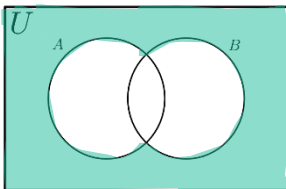

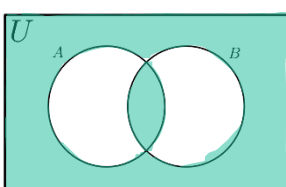



| Tipo | Español | Notación Matemática | Álgebra Booleana | Conjuntos¹ | Diagrama de Venn | Circuitos² | Python | Tabla de Verdad | | | | | | | | | | | | | | | |
|------|----------------------|---------------------|------------------|--------------------|--|---|---------|--|---|----------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|
| NOT | Negación | $\neg p$ | \bar{P} | A^C - A' |  |  | not P | <table><tr><th>p</th><th>$\neg p$</th></tr><tr><td>T</td><td>F</td></tr><tr><td>F</td><td>T</td></tr></table> | p | $\neg p$ | T | F | F | T | | | | | | | | | |
| p | $\neg p$ | | | | | | | | | | | | | | | | | | | | | | |
| T | F | | | | | | | | | | | | | | | | | | | | | | |
| F | T | | | | | | | | | | | | | | | | | | | | | | |
| AND | Conjunción | $p \wedge q$ | $P \cdot Q$ | $A \cap B$ |  |  | P and Q | <table><tr><th>p</th><th>q</th><th>$p \wedge q$</th></tr><tr><td>T</td><td>T</td><td>T</td></tr><tr><td>T</td><td>F</td><td>F</td></tr><tr><td>F</td><td>T</td><td>F</td></tr><tr><td>F</td><td>F</td><td>F</td></tr></table> | p | q | $p \wedge q$ | T | T | T | T | F | F | F | T | F | F | F | F |
| p | q | $p \wedge q$ | | | | | | | | | | | | | | | | | | | | | |
| T | T | T | | | | | | | | | | | | | | | | | | | | | |
| T | F | F | | | | | | | | | | | | | | | | | | | | | |
| F | T | F | | | | | | | | | | | | | | | | | | | | | |
| F | F | F | | | | | | | | | | | | | | | | | | | | | |
| OR | Disyunción | $p \vee q$ | $P + Q$ | $A \cup B$ |  |  | P or Q | <table><tr><th>p</th><th>q</th><th>$p \vee q$</th></tr><tr><td>T</td><td>T</td><td>T</td></tr><tr><td>T</td><td>F</td><td>T</td></tr><tr><td>F</td><td>T</td><td>T</td></tr><tr><td>F</td><td>F</td><td>F</td></tr></table> | p | q | $p \vee q$ | T | T | T | T | F | T | F | T | T | F | F | F |
| p | q | $p \vee q$ | | | | | | | | | | | | | | | | | | | | | |
| T | T | T | | | | | | | | | | | | | | | | | | | | | |
| T | F | T | | | | | | | | | | | | | | | | | | | | | |
| F | T | T | | | | | | | | | | | | | | | | | | | | | |
| F | F | F | | | | | | | | | | | | | | | | | | | | | |
| XOR | Disyunción exclusiva | $p \nabla q$ | $P \oplus Q$ | $A \triangle B$ |  |  | P ^ Q | <table><tr><th>p</th><th>q</th><th>$p \nabla q$</th></tr><tr><td>T</td><td>T</td><td>F</td></tr><tr><td>T</td><td>F</td><td>T</td></tr><tr><td>F</td><td>T</td><td>T</td></tr><tr><td>F</td><td>F</td><td>F</td></tr></table> | p | q | $p \nabla q$ | T | T | F | T | F | T | F | T | T | F | F | F |
| p | q | $p \nabla q$ | | | | | | | | | | | | | | | | | | | | | |
| T | T | F | | | | | | | | | | | | | | | | | | | | | |
| T | F | T | | | | | | | | | | | | | | | | | | | | | |
| F | T | T | | | | | | | | | | | | | | | | | | | | | |
| F | F | F | | | | | | | | | | | | | | | | | | | | | |

¹ Para los conjuntos y los diagramas de Venn, usaremos A y B, que es la notación usual en conjuntos.

² Para esta hoja, usamos la Z para representar la salida de la puerta lógica.

| Tipo | Español | Notación Matemática | Álgebra Booleana | Conjuntos ³ | Diagrama de Venn | Circuitos ⁴ | Python | Tabla de Verdad | | | | | | | | | | | | | | | |
|--------|------------|---------------------|-------------------------|--|--|---|---------------|--|-----|-----|------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Buffer | Afirmación | p | P | A |  |  | P | <table><tr><th>p</th><th>p</th></tr><tr><td>T</td><td>T</td></tr><tr><td>F</td><td>F</td></tr></table> | p | p | T | T | F | F | | | | | | | | | |
| p | p | | | | | | | | | | | | | | | | | | | | | | |
| T | T | | | | | | | | | | | | | | | | | | | | | | |
| F | F | | | | | | | | | | | | | | | | | | | | | | |
| NAND | - | $p \uparrow q$ | $\overline{P \cdot Q}$ | $(A \cap B)^c$ - $(A \cap B)'$ |  |  | not (P and Q) | <table><tr><th>p</th><th>q</th><th>$p \uparrow q$</th></tr><tr><td>T</td><td>T</td><td>F</td></tr><tr><td>T</td><td>F</td><td>T</td></tr><tr><td>F</td><td>T</td><td>T</td></tr><tr><td>F</td><td>F</td><td>T</td></tr></table> | p | q | $p \uparrow q$ | T | T | F | T | F | T | F | T | T | F | F | T |
| p | q | $p \uparrow q$ | | | | | | | | | | | | | | | | | | | | | |
| T | T | F | | | | | | | | | | | | | | | | | | | | | |
| T | F | T | | | | | | | | | | | | | | | | | | | | | |
| F | T | T | | | | | | | | | | | | | | | | | | | | | |
| F | F | T | | | | | | | | | | | | | | | | | | | | | |
| NOR | - | $p \downarrow q$ | $\overline{P + Q}$ | $(A \cup B)^c$ - $(A \cup B)'$ |  |  | not (P or Q) | <table><tr><th>p</th><th>q</th><th>$p \downarrow q$</th></tr><tr><td>T</td><td>T</td><td>F</td></tr><tr><td>T</td><td>F</td><td>F</td></tr><tr><td>F</td><td>T</td><td>F</td></tr><tr><td>F</td><td>F</td><td>T</td></tr></table> | p | q | $p \downarrow q$ | T | T | F | T | F | F | F | T | F | F | F | T |
| p | q | $p \downarrow q$ | | | | | | | | | | | | | | | | | | | | | |
| T | T | F | | | | | | | | | | | | | | | | | | | | | |
| T | F | F | | | | | | | | | | | | | | | | | | | | | |
| F | T | F | | | | | | | | | | | | | | | | | | | | | |
| F | F | T | | | | | | | | | | | | | | | | | | | | | |
| XNOR | - | $p \odot q$ | $\overline{P \oplus Q}$ | $(A \triangle B)^c$ - $(A \triangle B)'$ |  |  | not (P ^ Q) | <table><tr><th>p</th><th>q</th><th>$p \odot q$</th></tr><tr><td>T</td><td>T</td><td>T</td></tr><tr><td>T</td><td>F</td><td>F</td></tr><tr><td>F</td><td>T</td><td>F</td></tr><tr><td>F</td><td>F</td><td>T</td></tr></table> | p | q | $p \odot q$ | T | T | T | T | F | F | F | T | F | F | F | T |
| p | q | $p \odot q$ | | | | | | | | | | | | | | | | | | | | | |
| T | T | T | | | | | | | | | | | | | | | | | | | | | |
| T | F | F | | | | | | | | | | | | | | | | | | | | | |
| F | T | F | | | | | | | | | | | | | | | | | | | | | |
| F | F | T | | | | | | | | | | | | | | | | | | | | | |

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