

On the Subject of The Red Button

Life isn't just a bunch of polar extremes, except for all the times binary is involved, during which it absolutely is.

The display will show ten boolean pairs represented by 0s and 1s. The 0s represent “false”, and the 1s represent “true”. The numbers in the top row pair with the numbers below them in the bottom row.

Red numbers represent a false statement, and green numbers represent a true statement. This coloration must be toggled to match the correct result of the logic gate written on the button.

To toggle a pair of numbers to be true or false, hold the button down over the timer tick in which the seconds digit is equal to the position in the rows. A cyan LED will light up to signify your position in the rows.

To submit the module, tap the button.

Logical connective symbol list

Symbol	Logic Gate	Meaning
\wedge	AND	Returns true if both inputs are true. Else returns false.
\vee	OR	Returns true if either input is true. Else returns false.
$\underline{\vee}$	XOR	Returns true if exactly one input is true. Else returns false.
$ $	NAND	Returns false if both inputs are true. Else returns true.
\downarrow	NOR	Returns false if either input is true. Else returns true.
\leftrightarrow	XNOR	Returns false if exactly one input is true. Else returns true.
\rightarrow	LEFT IMPLICATION	Returns false when top input is true and bottom input is false. Else returns true.
\leftarrow	RIGHT IMPLICATION	Returns false when bottom input is true and top input is false. Else returns true.

