

On the Subject of The Red Button

This is a button. It is red.

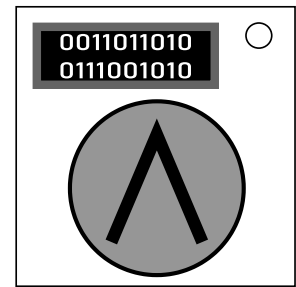
The module contains a red button with a logic gate written on it and a screen consisting of red and green 0's and 1's.

The 0's represent "false", and the 1's 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. These statements must be determined to be true or false based on 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. |
| \mid | 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 left input is true and right input is false. Else returns true. |
| \leftarrow | RIGHT IMPLICATION | Returns false when right input is true and left input is false. Else returns true. |