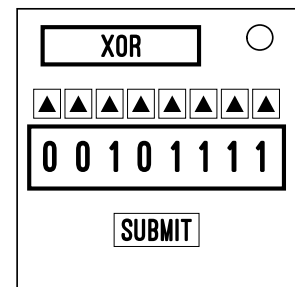# On the Subject of Bitwise Operations

Nobody's favorite kind of math. Who even likes math, anyway?

- There are 2 screens on the module:

  1. Bitwise operator (AND, OR, XOR, NOT)
  2. Result input

- Use the two bytes obtained from the tables below, and the operator from the first display, to determine the answer. In these tables, MSB is the most significant bit, LSB the least significant bit.

Byte 1	Bit	Byte 2
No AA batteries	MSB	1 or more D battery
Parallel port		3 or more ports
Lit indicator NSA		2 battery holders or more
More modules than you have (starting) time in minutes		Lit indicator BOB
More than one lit indicator		More than one unlit indicator
Number of modules divisible by 3		Odd serial number
Less than 2 D batteries		Even number of modules
Less than 4 ports	LSB	2 or more batteries

Here is a table of explanations of each bitwise operator:

Info	AND	OR	XOR	NOT
HOW	Going bit by bit, if both bits are 1, the return bit is 1. Otherwise, the return bit is 0.	Going bit by bit, if either (or both) bit is 1, the return bit is 1. Otherwise, the return bit is 0.	Going bit by bit, if either (but not both) bits are 1, the return bit is 1. Otherwise, the return bit is 0.	Ignore the second operand. Going bit by bit, the return bit is the opposite.
MATH	bit1 && bit2	bit1 || bit2	(bit1 && !bit2) || (!bit1 && bit2)	!bit1