# On the Subject of XORshift

Now you can't blame bad RNG on the game.

The XORshift module features a display showing a colored number, along with a "Yes" button and a "No" button. The displayed number could either be correct or incorrect after following the corresponding steps below. The goal is to determine if the display number matches the resulting number after these steps.
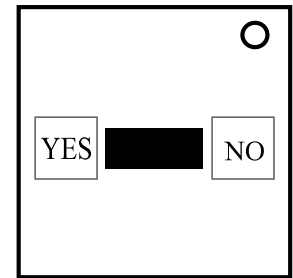
In order to solve the module, first add every value of the serial number together, (A=1, Z=26) this is your starting number. Then, using the lookup table below, find the correct shift amount.

	0-1 Batteries	2 Batteries	3 Batteries	4 Batteries	5+ Batteries
Blue	1	4	0	3	2
Red	3	2	4	3	3
Yellow	2	3	1	4	2
Magenta	2	3	4	2	1
Green	3	2	4	3	4

Now, convert the starting number into an 8-bit Binary number, (eg. 36 becomes 00100100.) and shift the bits right by your shift amount (00100100 becomes 00010010 with a shift of 1.), this is your second number.

Bitwise XOR your original number and second number together, and convert the result back into Decimal. If the resulting number matches the number on the display, press "Yes", if not, then press "No".