## The Shaker

## On the Subject of The Shaker

Let's shake things up, shall we?

This module will contain sixteen balls, each labeled with a unique number\* from zero to nineteen (inclusive). You must input four numbers into the module to solve it.



To input a number, set the four lights to their proper

statuses and press the center of the module. The number when all of the lights are off is zero. The bottom-right light represents adding one to the number, the bottom-left two, the top-right four, and the top-left eight.

To determine the numbers to input, take the following steps:

- Take the four numbers missing from the balls (call them A D in order from greatest to smallest).
- Add 10 to each and multiply them together.
- Associate the 4 least significant digits of this product with A D.
- Order by the associated digits (then by the original number in case of ties).
- Convert A D to new numbers according to the below table and submit those in the new order.

Ordered Number	Submitted Number	Ordered Number	Submitted Number
0	15	10	9
l	6	11	7
2	14	12	3
3	0	13	11
4	7	14	9
5	15	15	4
6	1	16	12 '
7 '	8	17	3
8	5	18	5
9	2	19	13

\*The 6 and 9 can be differentiated by the dots present bottom-right of the numbers.