

On the Subject of The Blue Button

This is a button. It is blue.

**Stage 1:** Note the cyclic sequence C of polyominoes and their colors. Place them on a toroidal<sup>1</sup> 6×4 grid Z such that same-color polyominoes do not touch orthogonally. Tap the button.

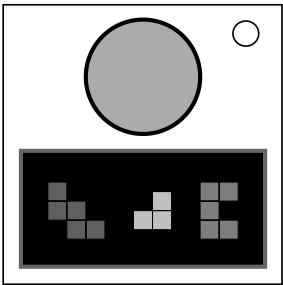
**Stage 2:** Find three consecutive polyominoes J, K, L in C whose colors occur consecutively in this cyclic sequence of N colors. Translate the color Q after the one corresponding to L to a permutation of suits P (table 1). Tap when Q is highlighted.

**Stage 3:** The absolute differences between each equation's true result and the one shown are N, D, X, M (in that order). Tap the button M times.

**Stage 4:** Press the button four times, with time intervals R, A, B between presses, to perform an action (table 2). Swap the suits such that diamonds is at position D and the remaining suits are in order P. Then convert the fillings, left to right, to numbers E, F, G, H (table 3). Submit to proceed to the next stage.

**Stage 5:** Find S, the Xth tile in K in reading order, within Z, and T, U, V, W, the next 4 tiles going right-from S. Move S, T, U and V down by E, F, G and H, respectively. Translate S, T, U, V, W to letters by noting which of their edges are edges of a polyomino (table 4). Use the underlined letter if a tile is part of a pentomino<sup>2</sup>. Enter the resulting word by tapping the button when the correct sections of the alphabet and individual letters are highlighted.

Hold the button to return to stage 1.



Q	P
blue	♠♥♣
green	♠♣♥
cyan	♥♠♣
red	♥♣♠
magenta	♣♠♥
yellow	♣♥♠

Table 1

	A < R	A > R
B < R	swap 1 & 2	swap 2 & 3
B > R	swap 3 & 4	submit

Table 2

♠	♠	♠	♠
0	1	2	3

Table 3

<u>Z</u>	<u>M</u> V	<u>X</u>	
<u>D</u> Y	<u>N</u> L	<u>U</u> B	<u>K</u> J
<u>A</u> R		<u>S</u> O	<u>E</u> P
<u>C</u> F	<u>I</u> T	<u>H</u> G	<u>W</u> Q

Table 4

<sup>1</sup> The grid wraps around both horizontally and vertically.  
<sup>2</sup> A polyomino consisting of exactly 5 tiles.