

On the Subject of The Navy Button

How do you shape up?

Fill a 4×4 grid with digits 0-3 such that each row and each column contains each digit exactly once. Stages 1 and 2 provide additional clues that make the solution unique.

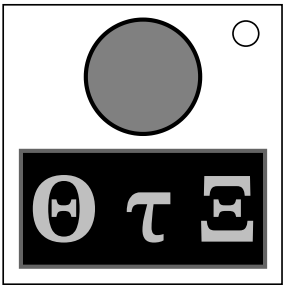
Stage 1: Find each displayed Greek letter in Grid G. An upper-case letter indicates that the cell below/to the right is less than the other; opposite for lower-case letters. Also find the midpoint on the gridline each Greek letter is on, and for each such midpoint, calculate the square of the distance to the next midpoint in the sequence, assuming a side length of 2 for each square in the grid. Tap the button.

Stage 2: Align the displayed sequence of numbers with the cyclic sequence of square distances calculated earlier. Subtract the associated square distances from each number to obtain C, R, D, M in order. Find the only alignment where C, R, D are in the range 0-3 and M is at least 4. The grid cell in column C, row R (0-indexed) must contain D. Tap the button M times.

Stage 3: Convert each displayed shape/color combination to a stencil as shown in Table S. Find four consecutive stencils which, when placed with the squares on the 3's in the solved grid in reading order, have only digits 0-2 in the circles (wrapping around the edges of the grid). Read these as three-digit ternary numbers (stencil's reading order) and convert those to letters (A = 001 ... Z = 222). Tap the button when the unused shape is highlighted.

Stage 4: Enter the word by tapping the button when the correct sections of the alphabet and individual letters are lit.

Hold the button to return to stage 1 at any time.



Αα		Ββ		Γγ	
Νν	Ξξ	Οο	Ππ		
Δδ		Εε		Ζζ	
Ρρ	Σσ	Ττ	Υυ		
Ηη		Θθ		Ιι	
Φφ	Χχ	Ψψ	Ωω		
Κκ		Λλ		Μμ	

Grid G

	Red	Yellow	Blue

Table S