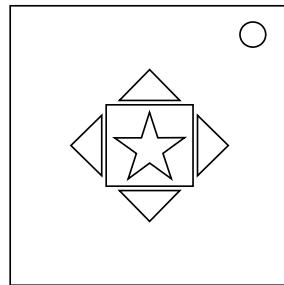


On the Subject of Mazematics

Wax lyrical about mazes mathematical.

- To solve the module, you must modify your current value to be equal to the goal value.
- Modify your current value by navigating the maze, moving from cell to adjacent cell. Each cell will add to or subtract from your current value.
- You must avoid having your current value be equal to one of a selection of restricted values, based on the restriction clause found on page 2.



Activating The Module

Before any interaction occurs, the module displays your initial value.

Click the central screen to begin.

Once active, the screen begins to cycle through eight images of shapes, and two numeric values. (Activating the module also **selects a random maze coordinate** – see the next section for details.)

The value of each shape is equal to **the last digit of the timer at the time it is being displayed** (excluding decimal places). These values will help you navigate the maze.

The numeric value displayed when **the last digit of the timer is a 0** is the goal value. A value displayed at any other time is the current value.

Navigating The Maze

Each cell of the maze has a numeric value from 1-9 and a positive or negative designation, depending on the **shape and sign** contained within. A starting coordinate for the maze is not chosen **until the module is activated**. At the moment of activation, a starting maze coordinate is randomly selected. **A value from 1-9 is added to or subtracted from the initial value**, as determined by the shape and sign of the cell at the starting coordinate.

From this point on, the maze can be manually navigated using the arrow buttons on the module. Each time a move is made to a new maze cell, **the value of the new cell** is again added or subtracted from the current value.

The maze is **contiguous with itself**; as such, it is possible to move from one edge of the maze to the other as though wrapping around from edge to edge.

The module can be reset at any time, without penalty, by clicking the screen. This reverts the module to the pre-activated state, as though it had never been interacted with: the current value is reset to the initial value; the module screen must be clicked to activate it; activating will reselect the same starting coordinate in the maze.

Striking And Solving

A strike will be incurred if:

- a move causes the current value to be equal to a restricted value. Note: this move is still valid - the current value and maze coordinate will change.
- an attempted move would cause the current value to become negative or exceed 49. Note: this move is not valid - the current value and maze coordinate will not change.

Exceptionally, a strike will not be incurred if:

- The first move causes the current value to be equal to a restricted value. The first move made after activation (either initially or after resetting the module) is always safe.
- The current value becomes equal to a restricted value, which is also the goal value. It is possible for the goal value to be equal to a restricted value, effectively removing the restriction on this value.

The module is solved once a move causes the current value to be equal to the goal value, any time after the first directional move. If the goal value is reached after a single move, the module will not solve (nor will it strike). Attempting to interact with the module after it is solved will not incur strikes.

Restriction Clause

Read top-down, and consider only the values associated with the first true condition met:

Condition	Restricted Values (see Appendix)
The shape found at the starting maze coordinate has four vertices	Triangular numbers*
The <u>initial value</u> before activation is a multiple of 3	Multiples of 7
The starting maze coordinate is positive (contains a + sign)	Prime numbers**
The previous conditions are not true	Values in the Fibonacci sequence***

The Maze

+	★+	▽	-	+	◇+	△	-
△	♥+	◀	-	▽+	□+	○-	★+
★+	△	□+	▽+	◀-	○-	○+	○-
○+	○-	○-	◇+	★	▽+	□+	△
▽	□+	★+	○-	△	○-	○-	○+
◀-	○+	○-	△+	○-	★	▽+	□+
○+	○-	○+	○+	-	△+	★	▽
-	▽	△	★+	+	○-	○+	◇+

Appendix

Below are explanations of some number sequences as found in the restriction clause:

- * Each pair of terms in the **Triangular number sequence** has a difference **one greater** than the previous pair. **1, 3, 6, 10...**
- ** 1 is not considered prime.
- *** Each term in the **Fibonacci sequence** is equal to the total of the previous two. 0 is sometimes included in the Fibonacci sequence, but is omitted in this instance. **1, 1, 2, 3, 5...**