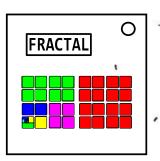
On the Subject of Forget Fractal

Fractals are so conceited. I mean, they're so full of themselves.

The module has a screen and an 8x4 grid. The current stage is displayed on the screen. When a module is activated or when another non-ignored module is solved, at least 3 cells of the grid will be colored in one of six colors: red, green, blue, cyan, magenta, yellow.



Remember the colors of each cell. Forget the previous color of the cell if it is lit again. When all non-ignored modules are solved, the stage number on the display will turn green - press the display to enter the submit mode.

To solve the module, change the colors of the minimum number of cells so that you get a valid 0-Fractal (its definition is on the next page). You can set the color of a cell by pressing it. When all the required cells have changed their color, press the display to submit. If the answer is wrong, you will get a strike and the module will go into recovery mode. Press the display again to return to submit mode.

Recovery modes:

- Blue display: The color of the cell has been changed to what it already has. These cells will continue to lit and the rest of the cells will turn black.
- Red display: The fractal is invalid. The constructed fractal will be displayed on the grid. You will receive the number of strikes equal to the minimum number of changes required to turn the submitted fractal into a valid 0-Fractal. But these strikes will not cause the bomb to explode if it can handle at least one more strike.
- Magenta display: The fractal is valid, but there is a solution that requires fewer color changes. All cells will lit with their own color. The minimum number of color changes will be shown on the display.

Algorithm for constructing #-Fractal:

- If the fractal is a square, then divide it equally horizontally.
- Otherwise, if the fractal is a rectangle, divide it into two equal squares.
- The cell colors of one half must be Color-# and the other half must be a valid (#+1)-Fractal.

Color-0 is red

Color-l is green

Colors-5+ can be any color

Determine the rest of the colors using the top row of the table below with the condition met.

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|--|---------|---------|---------|
| Condition | Color-2 | Color-3 | Color-4 |
| Sum of serial digits divisible by 6 | magenta | yellow | blue |
| More than 2 port plates | blue | magenta | yellow |
| More than 2 indicators | yellow | blue | magenta |
| At least 5 batteries OR more than 63 modules | magenta | blue | yellow |
| Starting time is at least 35 minutes | yellow | magenta | blue |
| Otherwise | blue | yellow | magenta |