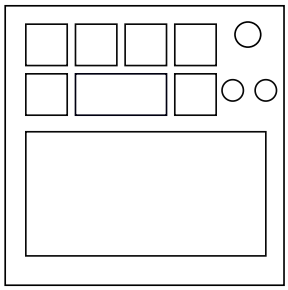
On the Subject of Indices Maxmius



"Who uses these equations in the first place!?" - someone who blew up and actually tried to use a calculator for this.

This module consists of a display showing a large expression, 4 smaller displays on the top denoting the roots correctly inputted, and 4 buttons between the smaller displays and the large expression.

To disarm the module, solve the 8th degree expression displayed on the module twice. Set this expression equal to 0 and solve the equation to find all solutions for x. Set the smaller displays corresponding to solutions to disarm the module by using the four buttons underneath. The left and right buttons will decrease or increase the value displayed on the currently selected button by 1 respectively. Pressing the same button that is not the left or right buttons will submit the displayed value as a solution.

If the current displayed number is **not** a valid solution for x, the module will incur a strike, and a new equation of the same degree will be generated. Roots which have already been marked correct will be lost. It is not necessary to select repeated roots multiple times, but there is no penalty for doing so.

Module Notes:

- The roots are all rational numbers within -9 to 9 inclusive.
  - Rational numbers are always in the form a / b where b ≠ 0, with its root written as bx - a.
  - For stage 1 of this module, b = 1.
  - For stage 2 of this module, b > 0, a ≠ 0, and a, b are coprime integers from -9 to 9 inclusive.
- Exactly 4 distinct roots are selected corresponding to the displayed expression. These distinct roots can repeat multiple times.