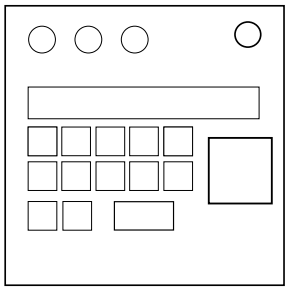
On the Subject of Equations



√-1 2^3 Σ π

- Based on information found on the module and the bomb, you must identify and solve a system of equations for a given variable.
- Use the first list to identify which system to use, the second to identify which variable you are solving for, and the table to define some variables you may find in your equation.
- Once you find the value of the correct variable, enter it and submit it using the equals button on the keypad present on the module (if applicable, only the first three decimal didgets).
- If your system has no solutions or an infinite number of solutions, click the submit button with a blank screen.
- Note:
  - A blank screen ≠ 0,
  - If either x or y is undefined, submit a blank screen; not just if both are,
  - and The plus/minus button has no effect if the number on screen is zero or blank.

Which System?

Use the first that applies:

- If there are more than two lit indicators, use the 2nd system.
- Otherwise, if the numbers 1, 5, and 9 are all the same color, use the 5th system.
- Otherwise, if there are more pink buttons than green buttons, use the 3rd system.
- Otherwise, if there are more LEDs on than off, use the 1st system.
- Otherwise, if serial number didgets total 16 or more, use the 6th system.
- Otherwise, use the 4th system.

Which Variable?

- If (indicators + lit LEDs) % 4 = 0 or 1, you must find x.
- Otherwise, you must find y.

Variables:

a	b	c	d
# of lit indicators % 3	Sum of the serial didget numbers minus twice the number of lit LEDs	Numeric value of the month the bomb was started on (1-12) plus the number of unlit LEDs	# of blue buttons multiplied by (# of red buttons minus # of yellow buttons)

Systems:

1	$ax+2y=c$ $bx+4y=c$
2	$ay=x+d$ $ay=2x+c$
3	$bx=by+c$ $by=x+a$
4	$a+c=x+y$ $x=b-2y$
5	$y-x=2d$ $2a=2x+cy$
6	$ax+by=c$ $bx+ay=d$