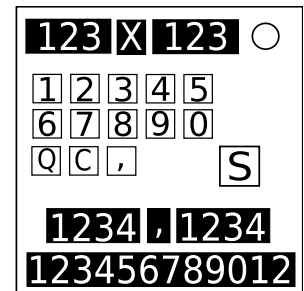


On the Subject of Malfunctions

How in the heck do you get ANYTHING from this??!?

WARNING: This module is prone to malfunctioning. When it is initialized, it will randomly select either +1 or -1, assigning that number to X, then it will randomly select one of the three following quirks: Adding X to the final query result (the result will not go below 0), moving on the list of functions by X after each query (wrapping around from 0 to 35, or vice versa, as needed; only the first Query Function is needed to figure out what the Final Function will be), and adding X to EACH variable (variables cannot become 0, nor can they go above 9,999).



- A Query Function will be randomly selected from the 36 on List 1, and the top displays will show two numbers from 1 to 999, with a letter in between.
- Enter digits using the numerical keypad; these digits will appear in the bottom display as they are entered. Entering a digit with twelve digits on the display will cause the leftmost digit to be erased to make room for the new digit.
- You may note the number entered as "a", the first number of a bivariate (two-variable) function, by pressing the comma button ",". This will cause the number entered (only the four least significant digits will be entered as the variable if more than four are displayed) to appear in the center left display, and a comma to appear in the top middle display. You may then enter a second, different number in the same way you entered the first. **If, when querying, both displayed input numbers are the same, either input number is the same as a number queried in the last non-striking query, or if either number is 0, a strike will be given.**

- Once both numbers have been entered, press the Query button "Q". This will put the second number (only the four least significant digits will be entered as the variable if more than four are displayed) in the center right display, and make it known as "b". This will also replace your input with the Query Function's output, using your inputted numbers. Any calculated answers, including the final answer necessary to disarm the module, will use only the twelve most significant digits, and will have all decimals dropped ONLY right before display, unless a function mentions otherwise. Pressing the comma will have no effect once it is displayed, and pressing Query will have no effect until the comma is entered or if it was just pressed.
- Press the Clear button "C" to clear all center and bottom displays and allow new variables to be entered.
- Find the Query Function being used by querying one or more times and using List 1, then use the letter on the top row along with Table 2. To find your Final Function, determine whether that letter's condition is true, then use the proper value that is X rows away (-1 means up, +1 means down), using the offset found to find the Final Function. Wrap around as necessary in both cases.
- Submit the answer to the Final Function that uses the top displays as input by entering the answer using the keypad, then pressing the Submit button "S".
- The most significant digits of a number are its leftmost, or most valuable, so the tens digit is more significant than the ones digit.

List 1: The Functions

#0: $\text{abs}(a \text{ minus } 3) \text{ times } \text{abs}(b \text{ minus } 3)$
#1: Larger modulo smaller
#2: 10,000 modulo Larger
#3: 7
#4: (Larger divided by smaller) modulo 10
#5: Triple the number of odd numbers
#6: $10 \text{ minus } (\text{abs}(\text{digits in } a \text{ minus digits in } b))$
#7: (sum of digits in a) times (sum of digits in b)
#8: a times b
#9: a plus b, modulo 12
#10: Highest digit
#11: $((a \text{ modulo } 10) \text{ cubed}) \text{ plus } ((b \text{ modulo } 10) \text{ cubed})$
#12: Lunar Addition
#13: $\text{abs}(10,000 \text{ minus } a) \text{ times } \text{abs}(1,000 \text{ minus } b)$
#14: (Larger modulo smaller) modulo 8
#15: Number of different digits
#16: Smaller minus (Larger modulo Smaller)
#17: Number of different odd digits
#18: $((a + b) \text{ times } 10) \text{ plus } (\text{abs}(a - b) \text{ modulo } 10)$
#19: a plus b
#20: (a times b) divided by (ports + 2)
#21: (a times b) modulo 10
#22: Number of different digits missing
#23: (Larger modulo smaller) times smaller
#24: $a + (b \text{ squared})$
#25: 11 minus twice the number of non-two-digit variables
#26: $\text{abs}(a \text{ minus } b)$
#27: (a times b) modulo 73
#28: Digits in a and b times 1,500
#29: 3 plus the number of numbers over 2,500
#30: (a squared) + b
#31: Larger divided by (digits in both a and b)
#32: $a + b + \text{concatenated serial number digits} + 1$
#33: 8 minus (Number of numbers below 100)
#34: (a modulo 50) + b
#35: Larger divided by smaller

Table 2: Letter Adjustments

| Condition | True | False |
|---|------|-------|
| A: KBU or M in SN? | +6 | -4 |
| B: Battery, indicator, or port count = 2? | +2 | -3 |
| C: First character in SN a digit? | +5 | -4 |
| D: Lit BOB indicator? | +8 | -8 |
| E: Unlit BOB indicator? | +6 | -2 |
| F: First character in SN a letter? | +6 | -5 |
| G: Parallel port but no Serial port? | +1 | -5 |
| H: At least one empty port plate? | +1 | -3 |
| I: No batteries? | +1 | +5 |
| J: Vowel in SN? | +5 | -3 |
| K: Indicators > 3? | +4 | -1 |
| L: Battery count even? | +6 | +7 |
| M: Ports > indicators? | +3 | -7 |
| N: More lit than unlit indicators? | +3 | -5 |
| O: Indicators > batteries? | +6 | -1 |
| P: Indicator count even? | +2 | -3 |
| Q: ERI or S in SN? | +1 | -3 |
| R: Exactly 3 letters in SN? | +3 | -2 |
| S: Batteries > ports? | +2 | +4 |
| T: Batteries > 4? | +4 | +1 |
| U: Lit and unlit indicator count equal? | +2 | -2 |
| V: JQX or Z in SN? | +7 | +1 |
| W: At least three ports? | +3 | -5 |
| X: No indicators? | +3 | -3 |
| Y: 4+ SN digits? | +4 | -1 |
| Z: No ports? | +5 | -1 |

Appendix F: Math (and other) Stuff

Absolute Value or $|x|$: The distance between x and 0. $|2 - 6| = 4$.

All Digits in Order: Each digit, from left to right, ignoring any duplicate numbers after the first. All the digits of 12814 in order would be 1284.

Concatenate: To link or join. "Cheese" concatenated with "burger" yields "Cheeseburger"; 7 concatenated with 3 yields 73.

Cubed: Multiplied by itself, then by itself again. 2 cubed is 8.

Digital Root: The continual summing of a number's digits until a single digit is obtained. The digital root of 129 is 3.

Lunar Addition: Addition but in each place (units, tens, etc.), take the higher number instead of adding. In Lunar Addition, $184 + 229 = 289$.

Modulo: The remainder from a division problem. 10 modulo 3 is 1.

Power: The number of times to multiply a number by itself. Cubing a number is the same as raising it to the third power.

Significance: The value of a number's place. The tens digit is more significant than the ones digit, the hundreds digit is more significant than the tens digit, etc.

sqrt(x): Square root. $\text{sqrt}(9) = 3$. Technically it's also -3 but you have to stay positive while defusing bombs so this module will never consider negative numbers here.

Squared: Multiplied by itself. 5 squared is 25.

Zero: 0 is an even number. If there is no output, the output will become 0.