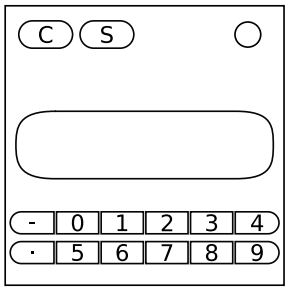
On the Subject of Encrypted Equations



The module everyone hated the moment they saw what an "equation" looked like.

- This module contains a 12-button keypad, a large display containing an equation, and a clear and submit button above it.
- The equation has been encrypted in a way where shapes, letters, and symbols represent numbers and operations.
- Decrypt the equation, then solve it, rounding to the nearest thousandth if necessary.
- **Important:** Any rounding should be done as commercial rounding.

Section 1: Shapes

- Every shape translates to a number value.
- This is the starting value for determining what the value actually is.

Shape	Value	Shape	Value	Shape	Value	Shape	Value
	0		5		10		35
	1		6		15		40
	2		7		20		45
	3		8		25		50
	4		9		30		100

Section 2: Letters/Symbols

- There will be a letter or symbol inside the shape.
- The letter/symbol translates to an operation and another value.
- Apply this to the value obtained from the shape.
- **Important:** Round to the nearest thousandth after calculating.

L/S	Value	L/S	Value	L/S	Value	L/S	Value
A	+1	F	÷2	#	+5	%	+10
B	+3	G	+2	H	×3	R	−5
C	−2	π	×1.5	O	−1	=	+4
D	−4	S	÷1.5	?	×10	/	×4
E	×2	N	−6	K	÷5	\	÷10

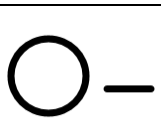
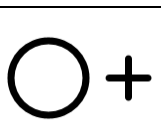
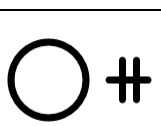
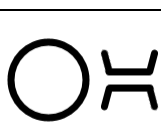
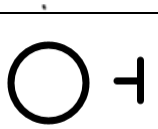
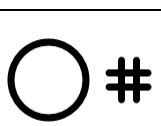
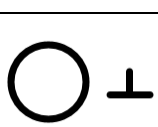
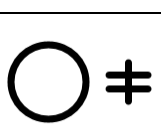
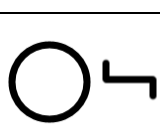
Section 3: Surrounding Symbols

- A symbol *may* surround the shape.
- This translates to another operation and value.
- Find the intersection between the symbol, and the compass direction the symbol is located in, on the table on the next page.
- No symbol = Skip this section.
- Apply this to the current value.
- **Important:** Round to the nearest thousandth after calculating.
- **Also important:** This is the final value unless something in Sect. 6 applies.
- Pictures of the symbols appear as if they are on the top of the symbol (North).
- Symbols are rotation-locked. Example: A horizontal line on the top of the symbol and a vertical line on the side of a symbol are both on the second row. A vertical line on the top of the symbol and a horizontal line on the side of a symbol are both on the third row.

	North	East	South	West
•	+1	−2	×3	+3
−	×1.5	÷5	−1	÷1.5
|	−4	+2	×2	×5
∘	+4	÷10	÷2	−3

Section 4: Operations

- The operations between numbers are encrypted as well.
- The circle next to each is for location reference.

+				
-				
×				
÷				
+				
-				
×				
÷				

Section 5: Parentheses

- The parentheses are encrypted just like everything else.
- Their appearance dictates their location.

Current Pair	Opposite Pair	Current Pair	Opposite Pair
			
			
			

Section 6: Other

- An "I" in the top-right corner of the shape symbolizes that this final value must be inverted (multiplied by -1).
- An "A" in the top-right corner of the shape symbolizes that this final value must be the absolute value of the current value.
- An "S" in the top-right corner of the shape symbolizes that this final value must be squared.
- A "C" in the top-right corner of the shape symbolizes that this final value must be cubed.
- **Important:** Round to the nearest thousandth after calculating.

Section 7: Solving

- Round to the nearest thousandth after:
  - Calculating a shape/letter/symbol combination.
  - Finding the total of the pair inside the parentheses.
  - Calculating the final total.
- Type the final answer into the display using the 12-button keypad.
- When inputting, the display will change from the equation to your current input.
- Press the clear button ("C" button) to erase your current input and switch back to the equation.
- Press the submit button ("S" button) once you finish inputting your solution.
- Submitting a wrong solution will result in strikes.
- **If, by any chance, the answer is undefined, simply hit submit without entering anything.**