Instruction	Mnemonic	Semantic Description
0	no op	Do nothing.
1 L	label	During program loading this instruction disappears, and all occurrences of L are replaced by the actual index in mem where the opcode 1 would have been stored.
2 L	call	Do all the steps necessary to set up for execution of the subprogram that begins at label L.
3 a	pass	Push the contents of cell a on the stack.
4 n	locals	Increase sp by n to make space for local variables in the current stack frame.
5 a	return	Do all the steps necessary to return from the current subprogram, including putting the value stored in cell a in rv.
6 a	get retval	Copy the value stored in rv into cell a.
7 L	jump	Change ip to L.
8 L a	cond	If the value stored in cell a is non-zero, change ip to L (otherwise, move ip to the next instruction).
9 a b c	add	Add the values in cell b and cell c and store the result in cell a.
10 a b c	subtract	Same as 9, but do cell b − cell c.
11 a b c	multiply	Same as 9, but do cell b * cell c.
12 a b c	divide	Same as 9, but do cell b / cell c.
13 a b c	remainder	Same as 9, but do cell b % cell c.
14 a b c	equal	Same as 9, but do cell b == cell c.
15 a b c	not equal	Same as 9, but do cell b != cell c.
16 a b c	less than	Same as 9, but do cell b < cell c.
17 a b c	less than or equal	Same as 9, but do cell b <= cell c.
18 a b c	and	Same as 9, but do cell b && cell c.
19 a b c	or	Same as 9, but do cell b || cell c.
20 a b	not	If cell b holds zero, put 1 in cell a, otherwise put 0 in cell a.
21 a b	opposite	Put the opposite of the contents of cell b in cell a.
22 a n	literal	Put n in cell a.
23 a b	copy	Copy the value in cell b into cell a.
24 a b c	get	Get the value stored in the heap at the index obtained by adding the value of cell b and the value of cell c and copy it into cell a.
25 a b c	put	Take the value from cell c and store it in the heap at the location with index computed as the value in cell a plus the value in cell b.
26	halt	Halt execution.
27 a	input	Print a ? and a space in the console and wait for an integer value to be typed by the user, and then store it in cell a.
28 a	output	Display the value stored in cell a in the console.
29	newline	Move the console cursor to the beginning of the next line.
30 a	symbol	If the value stored in cell a is between 32 and 126, display the corresponding symbol at the console cursor, otherwise do nothing.
31 a b	new	Let the value stored in cell b be denoted by *m*. Decrease hp by *m* and put the new value of hp in cell a.
32 n	allocate global space	This instruction must occur first in any program that uses it. It simply sets the initial value of sp to n cells beyond the end of stored program memory, and sets gp to the end of stored program memory.
33 n a	Copy to global	Copy the contents of cell a to the global memory area at index gp+n.
34 a n	Copy from global	Copy the contents of the global memory cell at index gp+n into cell a.