**Instruction Summary**

The following is the instruction set the emulator supports. All operands are addresses in the data section unless otherwise specified. Columns left blank are ignored by the instruction. Test operations move the instruction pointer to the program address given. Note that -7 and -9 are both unused and return an error.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **op** | **xxx** | **yyy** | **ddd** |
| Move | +0 | Source | - | Dest |
| Add | +1 | 1 | 2 | Result |
| Multiply | +2 | 1 | 2 | Result |
| Square | +3 | 1 | - | Result |
| == test | +4 | 1 | 2 | Program |
| >= test | +5 | 1 | 2 | Program |
| Array get | +6 | Array base | Index | Dest |
| Increment and test (counter < max) | +7 | Counter | Max value | Program |
| Read input | +8 | - | - | Dest |
| End program | +9 | - | - |  |
| Negate and move | -0 | Source | - | Dest |
| Subtract | -1 | 1 | 2 | Result |
| Divide | -2 | 1 | 2 | Result |
| Square root | -3 | 1 | - | Result |
| != test | -4 | 1 | 2 | Program |
| < test | -5 | 1 | 2 | Program |
| Array set | -6 | Source | Array base | Index |
| Unused | -7 | - | - | - |
| Print data | -8 | Source | - | - |
| Unused | -9 | - | - | - |