Exponent Calculator

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

Kirill wants to make his own calculator. However, he faced a serious problem — he should add buttons that calculate some complex functions.

His calculator has 16 registers $\$0, \$1, \ldots, \$15$, each containing 64-bit floating point number (in double-precision floating-point format).

Calculator operations should be represented by the sequence of commands using registers:

- $\$i$ = operand1 operation operand2
- $\$i$ = value

In the first command, operand1 and operand2 can be either real numbers or one of the registers. At least one of the operands should be a register, and operation should be one of `+`, `-`, `*`, which correspond to sum, subtraction, and multiplication, respectively.

In the second command, value should be some real number (registers are not allowed).

To calculate this operation, the initial value of register \$1 is equal to x (input of the operation), initial values of other registers are equal to 0. After that, all commands are executed. Firstly, the value on the right hand side is calculated and assigned to the register on the left hand side. Output of the operation is the value of register \$0, and the values of other registers are not taken into account.

Write a sequence of at most 25 commands that will calculate the function e^x with good precision for all $x \in [-20, 20]$ (e is Euler's number and the base of natural logarithm).

Input

You can consider this problem as an output-only problem.

The problem has exactly one test which contains a single string "`input`".

Output

The first line contains a single integer k ($0 \le k \le 25$) — the number of commands. The next k lines should describe a sequence of commands that will calculate e^x with good precision.

Each of the next k lines should contain a command in one of two given formats. Conditions described above should be satisfied. For all registers $\$i$ the condition $0 \le i \le 15$ should be satisfied.

Note that in this problem, it is important to use the first line only for the number of commands and print exactly one operation in each of the next k lines (without any blank lines in between). All operands, operation, and = sign should be separated by space.

For all $x = \frac{n}{10^5}$ for an integer n ($-2 \cdot 10^6 \le n \le 2 \cdot 10^6$), the sequence of commands will be executed.

Suppose the answer equals $y_1 = e^x$, and the calculated answer equals y_2. The answer will be considered correct if $\frac{|y_1 - y_2|}{y_1} \le 10^{-9}$ is satisfied.

Example

standard input	standard output
input	6 $0 = $0 * $0 $0 = 2.718281828459 $0 = $1 + $0 $15 = 8.1000000737 * $0 $12 = $15 * 0.123456789 $0 = $12 - $1

Note

The presented answer is given as an example and is incorrect.

It is easy to see that for all x, it calculates e approximately (so the answer is correct for $x = 1$).