

Alphabet Arithmetic

In his Introduction to Digital Arts and Sciences class, Dave frequently assigns homework. It usually consists of tedious exercises involving integer arithmetic. The students respond like true students: by complaining. So, to make the homeworks more exciting for his students, Dave has decided to disguise the exercises as alphabet arithmetic! This is exactly the same as integer arithmetic, except that instead of the usual digits 0 through 9, it uses letters A through J as the digits.

Help Dave generate the key to the homework!

Input

Each test case will be on one line of the form "NUMBER OP NUMBER". Each NUMBER is positive and less than 100000. OP is one of +, -, *, /. You will not have to divide by zero.

Output

For each test case, output the alphabet arithmetic answer on a single line.

Example

Input:

G * H
D - F
B + B
H / C

Output:

EC
-C
C
D