ROMAN NUMERALS

You are given two numbers in Roman system(modern Roman Numerals) and an operator. Output is the result in roman system.

Input

You are given two space separted number in roman system and after space an operator on the same line.Operator can be +,-,/,*,%.

Numbers a,b: 1<=a,b<5000

eg:4000=MMMM, for numbers >=4000, you should use MMMM.....

for others as per definition

Input consists of 5 testcases.

Output

Output is the result<5000 of performing the operation. Print on separte line

Example

Input:
LX XV +

X V *

Output:
LXXV

L

//**problem placement changed to challenge**