ASTU_ICPC CLUB
ROMAN

Description

Roman numerals are an ancient numbering system. If you are unfamiliar with roman numerals, refer to the sheet at the back of the problem set. The Problem: Add two roman numerals, expressing the result in roman numerals.

Roman Numeral Reference

Roman Numeral Symbols:

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

The roman numeral representation of a number is the shortest possible combination of the above symbols which add up to the number, arranged in descending order. 4's and 9's are handled specially, by subtraction. A smaller symbol is placed befor a larger one, and is subtracted from it. For example, IV is four, and XC is ninety. The representation of each number is **unique**- there can only be **one** representation for any number.

I	1	X	10	C	100	M	1000
II	2	XX	20	CC	200	MM	2000
III	3	XXX	30	CCC	300	MMM	3000
IV	4	XL	40	CD	400		
V	5	L	50	D	500		
VI	6	LX	60	DC	600		
VII	7	LXX	70	DCC	700		
VII	8	LXXX	80	DCCC	800		
IX	9	XC	90	CM	900		

For example, 1987 is MCMLXXXVII

The Input:

Several pairs of roman numerals. Only the capital letters **I, V, X, L, C, D** and **M** will be used. Each roman numeral will be on a separate line, starting in column one. The roman numerals and their sums are guaranteed to be within the range of 1 to 3999, inclusive.

The Output:

For each pair of roman numerals, print the sum, expressed in roman numerals. (Capital letters only, please.)

Sample Input:

3
III
VI
XXIII
XXVII
MCMLXXXIV
DXIV

Sample Output:

IX
L
MMCDXCVIII