ROMAN NUMERALS PROBLEM

Roman numerals, the numeric system used in ancient Rome, uses combinations of letters from the Latin alphabet to signify numerical values. From the 14th century on . Roman numerals began to be replaced by the more convenient Hindu-Arabic numerals that we use today. Nonetheless, Roman numerals are still used in some situations.

The basic Roman numerals are
I 1
V 5
X 10
L 50
C 100
D 500
M 1000

Numerals are placed left-to-right in order, largest first and added together. I,X,C and M can be repeated up to three times. The largest Roman numeral is MMMDCCCLXXXVIII = 3888. To avoid four identical numerals to appear in a row, the following exceptions apply: IV=4, IX=9, XL=40, XC=90, CD=400, CM=900

Write a converter program from Roman numerals to positive integers and back.

For each problem the input line is a line containing either Roman numeral or an Hindu-Arabic integer in the range 1-3888. You are to output the corresponding conversion.

Input (roman.txt)
2013
MMXIV
2015

Output
MMXIII
2014
MMXV