

## Problem S2: Aromatic Numbers

### Problem Description

This question involves calculating the value of *aromatic* numbers which are a combination of Arabic digits and Roman numerals.

An aromatic number is of the form  $ARARAR \dots AR$ , where each  $A$  is an Arabic digit, and each  $R$  is a Roman numeral. Each pair  $AR$  contributes a value described below, and by adding or subtracting these values together we get the value of the entire aromatic number.

An Arabic digit  $A$  can be 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9. A Roman numeral  $R$  is one of the seven letters I, V, X, L, C, D, or M. Each Roman numeral has a base value:

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

The value of a pair  $AR$  is  $A$  times the base value of  $R$ . Normally, you add up the values of the pairs to get the overall value. However, wherever there are consecutive symbols  $ARA'R'$  with  $R'$  having a *strictly bigger* base value than  $R$ , the value of pair  $AR$  must be *subtracted* from the total, instead of being *added*.

For example, the number 3M1D2C has the value  $3 * 1000 + 1 * 500 + 2 * 100 = 3700$  and 3X2I4X has the value  $3 * 10 - 2 * 1 + 4 * 10 = 68$ .

Write a program that computes the values of aromatic numbers.

### Input Specification

The input is a valid aromatic number consisting of between 2 and 20 symbols.

### Output Specification

The output is the decimal value of the given aromatic number.

### Sample Input 1

3M1D2C

### Output for Sample Input 1

3700

### Sample Input 2

2I3I2X9V1X

### Output for Sample Input 2

-16