13. Roman to Integer

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Roman numerals are represented by seven different symbols: `I`, `V`, `X`, `L`, `C`, `D` and `M`.

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

For example, two is written as `II` in Roman numeral, just two one's added together. Twelve is written as, `XII`, which is simply `X` + `II`. The number twenty seven is written as `XXVII`, which is `XX` + `V` + `II`.

Roman numerals are usually written largest to smallest from left to right. However, the numeral for four is not `IIII`. Instead, the number four is written as `IV`. Because the one is before the five we subtract it making four. The same principle applies to the number nine, which is written as `IX`. There are six instances where subtraction is used:

- `I` can be placed before `V` (5) and `X` (10) to make 4 and 9.
- `X` can be placed before `L` (50) and `C` (100) to make 40 and 90.
- `C` can be placed before `D` (500) and `M` (1000) to make 400 and 900.

Given a roman numeral, convert it to an integer. Input is guaranteed to be within the range from 1 to 3999.

Example 1:

```
Input: "III"
Output: 3
```

Example 2:

```
Input: "IV"
Output: 4
```

Example 3:

```
Input: "IX"
Output: 9
```

Example 4:

```
Input: "LVIII"
Output: 58
Explanation: L = 50, V= 5, III = 3.
```

Example 5:

```
Input: "MCMXCIV"
Output: 1994
Explanation: M = 1000, CM = 900, XC = 90 and IV = 4.
```

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Hide Hint 1 ⌃

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

Hide Hint 2 ⌃

Rules:
* If I comes before V or X, subtract 1 eg: IV = 4 and IX = 9
* If X comes before L or C, subtract 10 eg: XL = 40 and XC = 90
* If C comes before D or M, subtract 100 eg: CD = 400 and CM = 900