

# 13. Roman to Integer

## Description

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, `2` is written as `II` in Roman numeral, just two ones added together. `12` is written as `XII` , which is simply `X + II` . The number `27` 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.

### Example 1:

```
Input: s = "III"
Output: 3
Explanation: III = 3.
```

### Example 2:

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

### Example 3:

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

### Constraints:

- `1 <= s.length <= 15`
- `s` contains only the characters `('I', 'V', 'X', 'L', 'C', 'D', 'M')` .
- It is **guaranteed** that `s` is a valid roman numeral in the range `[1, 3999]` .

