

13. Roman to Integer

Easy

👍2730

👎3810

❤Add to List

🔗Share

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 one's 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

Example 2:

Input: s = "IV"

Output: 4

Example 3:

Input: s = "IX"

Output: 9

Example 4:

Input: s = "LVIII"

Output: 58

Explanation: L = 50, V= 5, III = 3.

Example 5:

Input: s = "MCMXCIV"

Output: 1994

Explanation: M = 1000, CM = 900, XC = 90 and IV = 4.

Constraints:

- $1 \leq s.length \leq 15$
- 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].