

Maximum Roman Numeral Length

THE CHALLENGE

Write a function that finds the maximum length of any Roman numeral up to n .

More Details

The first five Roman numerals are I, II, III, IV, V, and so the maximum length of any Roman numeral up to $n = 5$ is 3.

What Your Function Should Do

Write a function `MaxRomanLength` that takes a positive integer n as an input and outputs the maximum length of any Roman numeral up to n . Use `RomanNumeral` to generate the numerals.

`MaxRomanLength [8]`

`Out[1] = 4`

`MaxRomanLength [100]`

`Out[2] = 8`

`MaxRomanLength [1000]`

`Out[3] = 12`

More Examples

Here are the first five Roman numerals:

`RomanNumeral [Range [5]]`

`Out[4] = { I, II, III, IV, V }`

The longest numeral has length 3:

```
MaxRomanLength[5]
```

```
Out[5]= 3
```

SCRATCH AREA

```
Max[Table[Length[Characters[RomanNumeral[n]]], {n, 1, 4, 1}]]
```

```
Out[6]= 3
```

ENTER YOUR CODE HERE

```
In[6]:= MaxRomanLength[n_Integer?Positive] :=  
Max[Table[Length[Characters[RomanNumeral[x]]], {x, 1, n, 1}]]
```

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