Class_Roman_Numerals

The Roman Numeral System uses 7 letters to represent numbers: I, V, X, L, C, D, M. They represent 1, 5, 10, 50, 100, 500, 1000 respectively. (More details in the next page.) Your task is to write the class **roman** to create Roman numerals, and the example usage is shown below. (For simplicity, we are only interested in Roman numerals from 1 to 4999.)

Structure of the class **roman**	Example usage of the class **roman**

`class roman:`
`  def __init__(self, r):`
 	
`  def __lt__(self, rhs):`
 	
`  def __str__(self):`
 	
`  def __int__(self):`
 	
`  def __add__(self, rhs):`
	`a = roman("MCCXXXIV")# 1234`
	
	`b = roman("LXVI")  # 66`
	
	`print( a < b )  # False`
	
	`print( str(a) )  # MCCXXXIV`
	
	`print( int(a) )  # 1234`
	
	`c = a + b`
	
	`print( str(c) )  # MCCC`

The method _lt_ is called when a < is used to compare two **roman** objects to compare if the left object is lesser than the right object.

The method _str_ is called when str(a) is called, when a is a **roman** object. Returns a string that represents a.

The method _int_ is called when int(a) is called, when a is a **roman** object. Returns an int that represents a.

The method _add_ is called when a + is used to add two **roman** objects together. Returns the sum of those two **roman** numbers.

Submission

Put the program below under the **roman** class you wrote, then submit to grader.

```
t, r1, r2 = input().split()
a = roman(r1); b = roman(r2)
if t == '1' : print(a < b)
elif t == '2' : print(int(a),int(b))
elif t == '3' : print(str(a),str(b))
elif t == '4' : print(int(a + b))
else : print(str(a + b))
```

Input

Three strings separated by spaces. (See example and the submission module above.)

Output

The result of the program above, dependent on the **`roman`** class.

Example

Input (from keyboard)	Output (on screen)
`1 III IV`	`True`
`1 IV III`	`False`
`2 MMMCMXCIX MMII`	`3999 2002`
`3 MCMLXXXVII MMCXXIV`	`MCMLXXXVII MMCXXIV`
`4 MM CMXCIX`	`2999`
`5 MMMMX CXXIX`	`MMMMCXXXIX`

Roman numerals

From Wikipedia, the free encyclopedia

"Latin numerals" redirects here. For counting in Latin, see Latin § Numbers.

The numeric system represented by **Roman numerals** originated in ancient Rome and remained the usual way of writing numbers throughout Europe well into the Late Middle Ages. Numbers in this system are represented by combinations of letters from the Latin alphabet. Roman numerals, as used today, are based on seven symbols:[1]

Symbol	I	V	X	L	C	D	M
Value	1	5	10	50	100	500	1,000

Roman numeric system

The numbers 1 to 10 are usually expressed in Roman numerals as follows:

I, II, III, IV, V, VI, VII, VIII, IX, X.

Numbers are formed by combining symbols and adding the values, so II is two (two ones) and XIII is thirteen (a ten and three ones). Because each numeral has a fixed value rather than representing multiples of ten, one hundred and so on, according to *position*, there is no need for "place keeping" zeros, as in numbers like 207 or 1066; those numbers are written as CCVII (two hundreds, a five and two ones) and MLXVI (a thousand, a fifty, a ten, a five and a one).

Symbols are placed from left to right in order of value, starting with the largest. However, in a few specific cases,[2] to avoid four characters being repeated in succession (such as IIII or XXXX), subtractive notation is used: as in this table:[3][4]

Number	4	9	40	90	400	900
Notation	IV	IX	XL	XC	CD	CM

- I placed before V or X indicates one less, so four is IV (one less than five) and nine is IX (one less than ten)
- X placed before L or C indicates ten less, so forty is XL (ten less than fifty) and ninety is XC (ten less than a hundred)
- C placed before D or M indicates a hundred less, so four hundred is CD (a hundred less than five hundred) and nine hundred is CM (a hundred less than a thousand)[5]

Read more at: https://en.wikipedia.org/wiki/Roman_numerals