Roman numbers (1)   P18298_en

Write a program that reads several numbers and prints their equivalent Roman number.

Remember that Roman numbers make use seven uppercase letters, which correspond to the following values:

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

These are the rules of Roman numbers:

- Each decimal digit is computed independently.

- Units $(1, 2, \ldots, 9)$ are represented, respectively, I, II, III, IV, V, VI, VII, VIII, IX. Nothing is written for 0.

- Tens $(10, 20, \ldots, 90)$ are written like units are, but repacing I by X, V by L, and X by C.

- Hundreds $(100, 200, \ldots, 900)$ are written like units are, but repacing I by C, V by D, and X by M.

- Thousands (1000, 2000 i 3000) are written like units are, but repacing I by M.

Input

Input consists of several natural numbers between 1 and 3999. (Roman people did not know zero, and the system described above cannot represent numbers greater than or equal to 4000.)

Output

For each number, print its equivalent Roman number.

Sample input

```
1
4
10
40
41
16
2708
999
3005
```

Sample output

```
1 = I
4 = IV
10 = X
40 = XL
41 = XLI
16 = XVI
2708 = MMDCCVIII
999 = CMXCIX
3005 = MMMV
```

Problem information

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