

# Roman Numerals

Roman numbers

4<sup>th</sup> century B.C.

- They were used during 4<sup>th</sup> century B.C.

Symbols → I, II, V, X → Latin alphabet.

L, C, D, M

- 1, 2, 3, 4, ... Arabic Numerals

Hindu Numerals

[Hindu-Arabic Numerals]

Roman Numeral	I	V	X	L	C	D	M
<u>Hindu-Arabic</u> Numeral	1	5	10	50	100	500	1000

Indo-Arabic

# Rules

Rule 1: Repetition of Roman numerals means addition.

Caution: (i) Only I, X, C and M can be repeated.

(ii) V, L and D cannot be repeated.

(iii) No numerals can be repeated more than thrice. (three times)

I → first  
II → second.  
III → third.

(2<sup>nd</sup>)

(~~IIII~~)  
IIII

IV = 4<sup>th</sup>

Elizabeth II

Class VII

Rule 2: A smaller numeral written to the right of a larger numeral is always added to the larger numeral.

eg. VI  $\rightarrow 5 + 1 = 6$

Rule 3: A smaller numeral written left of a larger numeral is always subtracted from the larger numeral.

- Caution:
- (i) 'V', 'L', and 'D' are never subtracted
  - (ii) 'I' can be subtracted from 'V' and 'X' only.
  - (iii) 'X' can be subtracted from 'L' and 'C' only.
  - (iv) only one numeral can be subtracted from one numeral.

~~eg.  $X \text{LIXV} \neq 13$~~

$\checkmark \text{XIII} = 13$

(v) 'C' can be subtracted from 'D' and 'M' only.

Rule 4: When a smaller numeral is placed between two larger numerals, then it is always subtracted from the larger numeral immediately following it.

eg:-

$$\underline{\text{XIV}} = \underline{10} + (5 - 1) = \underline{14}$$

$$\underline{\underline{\text{XIX}}} = 10 + (10 - 1) = 19$$

Rule 5: A bar or a line on a number increases its value by 1000 times.

Ex:

$$\overline{XV} = 15$$

$$\overline{\overline{XV}} = 15 \times 1000 = 15000$$

# Indo-Arabic to Roman numerals

(i) 1900 → ~~CM~~M MCM ✓

(ii) 900 → CM

XC

(iii) 54 → LIV

(iv) 84 → LXXXIV

(v) 108 → CVIII

(vi) ~~888~~ →

800 → DCCC

888 → DCCCLXXXVIII

8888 → VIII DCCCLXXXVIII

999 →

900 → CMXCIX

L C D M  
50 100 500 1000

900 + 90 + 9

415  $\Rightarrow$  CDXV

777  $\Rightarrow$  DCCCLXXVII

666  $\Rightarrow$  DCLXVI

555  $\rightarrow$  DLV

111  $\rightarrow$  CXI

50000  $\rightarrow$  L

Roman Numeral  $\longrightarrow$  Indo-Arabic numerals

LXIII  $\longrightarrow$  63

MMCC  $\longrightarrow$  2200

XCVIII  $\longrightarrow$  98

CDXCVIII  $\longrightarrow$  498



End of the chapter