

Subject: Mathematics

Date : 22-04-2020

CLASS- III

Topic: Roman Numerals

Synopsis

- Roman numerals are the numeral system that originated in ancient Rome.
- Numbers in this system are represented by combinations of seven Alphabets, based on some rules.
- The values of the seven symbols are given below:

Roman Numerals	I	V	X	L	C	D	M
Hindu – Arabic Numerals	1	5	10	50	100	500	1000

- Repetition of a Roman numeral is not allowed more than thrice.
- 'I' can be subtracted from V and X only.
- 'V' is never subtracted from any number.
- 'X' can be subtracted from 'L' and 'C' only.
- V, L are never repeated.

We can observe the hours from 1 to 12 in Roman numerals on the Clock of Big ben in LONDON.



In Roman numerals, there is no zero and place value chart.

Rule 1: Repetition of a numeral means addition. No numeral can be repeated more than 3 times.

$$\text{II} = 1 + 1 = 2$$

$$\text{III} = 1 + 1 + 1 = 3$$

$$\text{XX} = 10 + 10 = 20$$

$$\text{XXX} = 10 + 10 + 10 = 30$$

Rule 2: A smaller numeral written to the right of a greater numeral means addition.

$$\text{VI} = 5 + 1 = 6$$

$$\text{XV} = 10 + 5 = 15$$

$$\text{XXXV} = 10 + 10 + 10 + 5 = 35$$

Rule 3: A smaller numeral written to the left of a greater numeral means subtraction.

$$IV = 5 - 1 = 4$$

$$IX = 10 - 1 = 9$$

$$XL = 50 - 10 = 40$$

Rule 4: When a smaller numeral is placed between two numerals of greater value, it is subtracted from the numeral on its right.

$$XIV = 10 + (5 - 1) = 10 + 4 = 14$$

$$\begin{aligned} XXIX &= 10 + 10 + (10 - 1) \\ &= 10 + 10 + 9 = 29 \end{aligned}$$

The following are the Roman numerals up to 30.

Hindu-Arabic Numerals	1	2	3	4	5	6	7	8	9	10
Roman Numerals	I	II	III	IV	V	VI	VII	VIII	IX	X

Hindu-Arabic Numerals	11	12	13	14	15	16	17	18	19	20
Roman Numerals	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX

Hindu-Arabic Numerals	21	22	23	24	25	26	27	28	29	30
Roman Numerals	XXI	XXII	XXIII	XXIV	XXV	XXVI	XXVII	XXVIII	XXIX	XXX