



# Regional and Roman Numerals

Digits such as 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 were used first by Indians. But later, Arabs came to India and learnt their use. So, these came to be known as **Hindu-Arabic numerals**.

## Roman Numerals ●

Before the arrival of Hindu-Arabic numerals, the Europeans used Roman numerals. They did not have a symbol for zero. Zero was invented by an Indian mathematician.

We see Roman numerals at many places around us, such as dials of watches, to exhibit number of classrooms and the volumes of books.

Roman numerals are 7 in number – I, V, X, L, C, D and M. The value of these numerals is as follows :

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



## Let us Know

In this class, we will read about using I, V and X. These are used to write numbers up to 39.

## Rules for Writing of Numbers by Roman Numerals ●

**Rule 1 :** If we write I and X together once, twice or thrice, their value is added together, such as :

$$II = 1 + 1 = 2$$

$$XX = 10 + 10 = 20$$

$$III = 1 + 1 + 1 = 3$$

$$XXX = 10 + 10 + 10 = 30$$

**Important :** 1. I and X cannot be written together for more than three times.

2. V can be written only once.

**Rule 2 :** To write a symbol to the left of a symbol with higher value means **subtraction**. Such as :

$$IV = 5 - 1 = 4$$

$$IX = 10 - 1 = 9$$

**Important :** 1. V can never be subtracted.

2. V cannot be written to the left of X.

**Rule 3 :** To write a symbol to the right of any symbol means **addition**, such as :

$$VI = 5 + 1 = 6$$

$$XI = 10 + 1 = 11$$

$$VII = 5 + 2 = 7$$

$$XV = 10 + 5 = 15$$

$$XVI = 10 + 6 = 16$$

$$XIV = 10 + 4 = 14$$

On the basis of these rules, following are the Hindu-Arabic numerals from 1-39 :

1	I	11	XI	21	XXI	31	XXXI
2	II	12	XII	22	XXII	32	XXXII
3	III	13	XIII	23	XXIII	33	XXXIII
4	IV	14	XIV	24	XXIV	34	XXXIV
5	V	15	XV	25	XXV	35	XXXV
6	VI	16	XVI	26	XXVI	36	XXXVI
7	VII	17	XVII	27	XXVII	37	XXXVII
8	VIII	18	XVIII	28	XXVIII	38	XXXVIII
9	IX	19	XIX	29	XXIX	39	XXXIX
10	X	20	XX	30	XXX		

### Use of Roman Numerals in India ●

1. Smaller Roman numerals are used to write different parts of questions, such as :

i, ii, iii, iv, v, vi, vii, viii, ix, x .....

2. Roman numerals are used to denote classrooms, such as class I, class II, class III, class IV, etc.



## Exercise 3

### 1. Write the following in Roman numerals :

- (a) 4  (b) 11  (c) 9  (d) 6  (e) 21  (f) 13   
 (g) 19  (h) 28  (i) 39  (j) 25  (k) 37  (l) 17

### 2. Write the Hindu-Arabic numerals :

- (a) IV  (b) XIV  (c) XVI  (d) XV   
 (e) XXVI  (f) XXIV  (g) XXIX  (h) XXXI   
 (i) XXXIII  (j) XXXVI  (k) XXXIX  (l) XXVIII

### 3. Encircle the correct Roman numerals :

- (a) 4 = III, IV (b) 3 = III, IIV (c) 10 = X, VV  
 (d) 25 = XXVX, XXV (e) 21 = IXX, XXI (f) 39 = XXXIX, IXXX

### 4. Match the Hindu-Arabic numerals and Roman numerals :

IV	5	XXI	29
V	9	XVI	21
IX	4	XXIX	16

### 5. Write the following in ascending order :

- (a) IV, VI, VIII, X, V   
 (b) XI, XVI, XX, IX, XIV

### 6. Write the following in descending order :

- (a) II, VII, VI, III, I   
 (b) X, XV, IX, XI, XIV

### 7. Write the answer in Roman numerals :

- (a)  $5 + 2 =$   (b)  $10 + 2 =$   (c)  $10 + 5 =$    
 (d)  $3 + 10 =$   (e)  $6 + 7 + 7 =$   (f)  $21 + 1 - 3 =$

### 8. Fill >, < or = in the blanks :

- (a) 10  XIX (b) XV  5 (c) 1+1  II (d) 10+4  XVI