



Roman Numerals

Children, in the last class, we have learnt to read and write Hindu-Arabic numerals up to 399 in Roman Numerals. The Roman numerals were used by the people of Rome and its basic reason was that they were unaware of the concept of zero. They also did not use the system of place value. The basic numerals used by Romans were 7, which are as follows :

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

Important In this class, we shall learn to read and write the numbers up to 3,999 by using I, V, X, L, C, D and M.

Rules of Forming Roman Numerals ●

Rule 1 : Writing, I, X, C and M once, twice and thrice makes its value one times, two times and three times respectively, such as :

1 = I	10 = X	100 = C	1000 = M
2 = II	20 = XX	200 = CC	2000 = MM
3 = III	30 = XXX	300 = CCC	3000 = MMM

Remember

No symbol can be written more than three times.

Rule 2 : V, L and D can be written only once.

Rule 3 : Leaving aside the values of the symbols, to write other numbers, we write different symbols together.

Rule 4 : Writing small numerals after a large numeral means addition, such as :

VII	→	(V + II = 5 + 2 = 7)
XII	→	(X + II = 10 + 2 = 12)
LXV	→	(L + X + V = 50 + 10 + 5 = 65)
CCLXX	→	(C + C + L + X + X = 100 + 100 + 50 + 10 + 10 = 270)

Rule 5 : Writing small numerals before a large numeral means subtraction, such as :

IV	→	(V - I = 5 - 1 = 4)	XC	→	(C - X = 100 - 10 = 90)
IX	→	(X - I = 10 - 1 = 9)	CD	→	(D - C = 500 - 100 = 400)
XL	→	(L - X = 50 - 10 = 40)	CM	→	(M - C = 1000 - 100 = 900)

But —

(a) I can be subtracted from V and X only once, such as :

$$IV = 5 - 1 = 4$$

$$IX = 10 - 1 = 9$$

(b) X can be subtracted from L and C only once, such as :

$$XL = 50 - 10 = 40 \qquad XC = 100 - 10 = 90$$

(c) C can be subtracted from D and M only once, such as :

$$CD = 500 - 100 = 400 \qquad CM = 1000 - 100 = 900$$

(d) V, L, D and M can never be subtracted.

Rule 6 : To write numbers larger than 3999, we draw a line above some digits, which increases their value 1000 times, such as :

$$\overline{IV} = 4 \times 1000 = 4000 \qquad \overline{V} = 5 \times 1000 = 5000 \qquad \overline{X} = 10 \times 1000 = 10,000$$

This makes it clear that it was very difficult to write larger numbers in Roman numerals. That is why they are not popular and recognised at international level. Today, Hindu-Arabic numerals are used extensively in the world.

Table to Write Hindu-Arabic Numerals in Roman Numerals ●

Ones	Tens	Hundreds	Thousands
1 = I	10 = X	100 = C	1000 = M
2 = II	20 = XX	200 = CC	2000 = MM
3 = III	30 = XXX	300 = CCC	3000 = MMM
4 = IV	40 = XL	400 = CD	4000 = \overline{IV}
5 = V	50 = L	500 = D	5000 = \overline{V}
6 = VI	60 = LX	600 = DC	6000 = \overline{VI}
7 = VII	70 = LXX	700 = DCC	7000 = \overline{VII}
8 = VIII	80 = LXXX	800 = DCCC	8000 = \overline{VIII}
9 = IX	90 = XC	900 = CM	9000 = \overline{IX}

Children, practising the above table regularly will make you an expert in writing Roman numerals.

Some Other Examples ●

Example 1 : Write the following Hindu-Arabic numerals in Roman numerals :

(a) 83 (b) 94 (c) 285 (d) 1524 (e) 7342

Solution :

<p>(a) 83 = 80 + 3 = LXXX + III = LXXXIII</p> <p>(c) 285 = 200 + 80 + 5 = CC + LXXX + V = CCLXXXV</p> <p>(e) 7342 = 7000 + 300 + 40 + 2 = \overline{VII} + CCC + XL + II = $\overline{VII}CCCXLII$</p>		<p>(b) 94 = 90 + 4 = XC + IV = XCIV</p> <p>(d) 1524 = 1000 + 500 + 20 + 4 = M + D + XX + IV = MDXXIV</p>
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Example 2 : Write the following Roman numerals in Hindu-Arabic numerals :

(a) CMLXII

(b) CCCLXV

(c) $\overline{\text{I}}\text{CCXLIV}$

(d) CMLXXXIII

Solution : (a) CMLXII = CM + LX + II
= 900 + 60 + 2
= **962**

(c) $\overline{\text{I}}\text{CCXLIV}$ = $\overline{\text{I}}$ + CC + XL + IV
= (1 × 1000) + 200 + 40 + 4
= 1000 + 200 + 40 + 4
= **1244**

(b) CCCLXV = CCC + LX + V
= 300 + 60 + 5
= **365**

(d) CMLXXXIII = CM + LXXX + III
= 900 + 80 + 3
= **983**

Remember

- ❖ The Roman Numerals have no concept of zero.
- ❖ Very large numbers cannot be written in Roman numerals.



Exercise 3



1. Write the numbers from 140 to 150 in Roman numerals.

2. Write the numbers in Roman numerals :

(a) 25

(b) 39

(c) 89

(d) 95

(e) 145

(f) 212

(g) 348

(h) 493

(i) 489

(j) 505

(k) 839

(l) 999

(m) 1010

(n) 1200

(o) 1914

(p) 1590

(q) 1809

(r) 3138

(s) 2485

(t) 4046

3. Write the following numbers in Hindu-Arabic numerals :

(a) XLVI

(b) CXL

(c) LXXXIX

(d) XCVIII

(e) CCCXL

(f) DXXXIII

(g) DLV

(h) CDXC

(i) DCCXC

(j) CMVIII

(k) DXCIV

(l) MCX

(m) DCXL

(n) MCCXXVI

(o) MDCCXX

(p) MMD

(q) MCMLI

(r) MDCLX

(s) MMCCXV

(t) $\overline{\text{V}}\text{DCCXCXV}$

4. Add the following :

(a) VII + III

(b) XII + III

(c) XXX + X

(d) XC + X

(e) CD + CC

(f) CM + D

(g) CCCL + CDLXXI

(h) MMC + MCCC

5. Tick (✓) the correct Roman numerals :

(a) 40 = XXXX, XL

(b) 99 = IC, XCIX

(c) 450 = CDL, LD

(d) 490 = XD, CDXC

6. Match the following :

(a) 56

(i) CI

(b) 101

(ii) MD

(c) 1500

(iii) XXXVII

(d) 37

(iv) LVI

(e) 654

(v) DCLIV

