

ROMAN NUMBERS

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Expt. No.

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- Roman numerals are a numeral system that originated in ancient Rome.
- In Roman system 7 letters used to write numbers.
- The Roman system does not have a zero (0). We use digits 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 to write numbers. This is called Hindu-Arabic (Indian Numeral) system.

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

RULES TO WRITE NUMBERS IN THE ROMAN SYSTEM

Rule-① The letters I, X, C and M can be repeated but not more than 3 times.

The letters V, L and D are never repeated.
(Repetition means addition.)

$$I = 1$$

$$II = 1 + 1 = 2$$

$$X = 10$$

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

$$C = 100$$

$$CC = 100 + 100 = 200$$

$$M = 1000$$

$$MM = 1000 + 1000 = 2000$$

Rule-② A smaller number written to the right means addition.

$$VII = 5 + 1 + 1 = 7$$

$$LX = 50 + 10 = 60$$

$$LXV = 50 + 10 + 5 = 65$$

$$LXXVIII = 50 + 10 + 10 + 5 + 1 + 1 + 1 = 78$$

Rule-③ A smaller number written to the left means subtraction.

$$IV = 5 - 1 = 4$$

$$XL = 50 - 10 = 40$$

$$IX = 10 - 1 = 9$$

$$XC = 100 - 10 = 90$$

(You can subtract only once.)

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H.W.
Learn the descriptions
DO Exercise 1.6 in copy.

Rule-④ A smaller number written between two greater number means it is subtracted from the number placed after it.

$$LIX = 50 + (10 - 1) = 59$$

$$XIX = 10 + (10 - 1) = 19$$

$$CXL = 100 + (50 - 10) = 140$$

Notes : → 'I' can only be subtracted from V and X.
→ X can only be subtracted from L and C.
→ C can only be subtracted from D and M.
→ V, L, D can never be subtracted.

Exercise - 1.6

A) Convert to Roman numbers.

$$\textcircled{5} \quad 53 = 50 + 3 = LIII \quad \textcircled{6} \quad 73 = 50 + 20 + 3 = LXXIII \quad \textcircled{7} \quad 84 = 50 + 30 + 4 = LXXXIV$$

$$\textcircled{8} \quad 97 = 90 + 7 = XCVII \quad \textcircled{9} \quad 46 = (50 - 10) + 6 = XLVI \quad \textcircled{10} \quad 29 = 10 + 10 + 9 = XXIX$$

B) Convert to Hindu-Arabic numbers.

$$\textcircled{1} \quad XVII = 10 + 7 = 17 \quad \textcircled{3} \quad XXXVI = 10 + 10 + 10 + 6 = 36 \quad \textcircled{f} \quad XLIX = 40 + 9 = 49$$

$$\textcircled{7} \quad LXXII = 50 + 10 + 10 + 2 = 72 \quad \textcircled{8} \quad XCVI = 90 + 6 = 96 \quad \textcircled{12} \quad XCV = 90 + 5 = 95$$

C) Fill in the \circ with $>$, $<$ or $=$.

$$\textcircled{1} \quad VII < VIII \quad \textcircled{2} \quad XII < XIII \quad \textcircled{3} \quad LXXII < LXXXII$$

$$\textcircled{4} \quad XXX < CC \quad \textcircled{5} \quad XLIII > XL \quad \textcircled{6} \quad XL < 40 + 10$$

$$\textcircled{7} \quad CC < 500 \quad \textcircled{8} \quad 4 \times 7 > XXVII \quad \textcircled{9} \quad 40 - 20 = XX$$

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