

KNOWING OUR NUMBERSExercise 1.1

① Write the smallest and the greatest number.

(a) 30900, 30594, 30945, 30495

Ans → Smallest number = 30495

Greatest number = 30945

(b) 10092, 10029, 10209, 10920

Ans → Smallest number = 10029

Greatest number = 10920

② Arrange the numbers in ascending order.

(a) 6089, 6098, 5231, 3953

Ans → Ascending order will be

3953, 5231, 6089, 6098

(b) 49905, 6073, 58904, 7392

Ans → Ascending order will be

6073, 7392, 49905, 58904

(c) 9801, 25751, 36501, 38802

Ans → Ascending order will be

9801, 25751, 36501, 38802

③ Arrange the numbers in descending order:

(a) 75003, 20051, 7600, 60632

Ans → Descending order will be

75003, 60632, 20051, 7600

~~(b) Descending order will be~~

(b) 2934, 2834, 667, 3289

Ans → Descending order will be

3289, 2934, 2834, 667

(c) 1971, 45321, 88715, 92547

Ans → Descending order will be

92547, 88715, 45321, 1971

④ Use the given digits without repetition and make the greatest and smallest 4 digit no.

(a) 6, 4, 3, 2

Ans → 4 digit greatest number = 6432

4 digit smallest number = 2346

(b) 9, 7, 0, 3

4 digit greatest number = 9730

4 digit smallest number = 3079

(c) 5, 4, 0, 3

4 digit greatest number = 5430

4 digit smallest number = 3045

(d) 3, 2, 7, 1

4 digit greatest number = 7321

4 digit smallest number = 1237

⑤ Using any one digit twice make the greatest and smallest 4 digit number:

(a) 2, 3, 7

Ans → 4 digit greatest number = 7732

4 digit smallest number = 2237

(b) 5, 0, 3

Ans → 4 digit greatest number = 5530

4 digit smallest number = 3005

(c) 2, 3, 0

Ans → 4 digit greatest number = 3320

4 digit smallest number = 2003

(d) 1, 3, 4

4 digit greatest number = 4431

4 digit smallest number = 1134

(e) 2, 5, 8

4 digit greatest number = 8852

4 digit smallest number = 2258

(f) 1, 2, 3

4-digit greatest number = 3321

4-digit smallest number = 1123

⑥ Read the following numbers using place value chart.

(a) 638975

(b) 84321

(c) 29061058

(d) 60003008

Ans →	CRORES		LAKHS		THOUSANDS		ONES		
	Ten Crores	Crores	Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
(a)				6	3	8	9	7	5
(b)					8	4	3	2	1
(c)		2	9	0	6	1	0	5	8
(d)		6	0	0	0	3	6	0	8

(a) Six lakh thirty eight thousand nine hundred seventy five.

(b) Eighty four thousand three hundred twenty one.

(c) Two crore ninety lakh sixty one thousand fifty eight.

(d) Six crore three thousand six hundred eight.

17) Insert commas suitably and write the names according to Indian system of Numeration:

(a) 98606873

Ans → 9,86,06,873

Nine crore eighty six lakh six thousand eight hundred seventy three.

(b) 7635172

Ans → 76,35,172

Seventy six lakh thirty five thousand one hundred seventy two.

(c) 89700057

Ans → 8,97,00,057

Eight crore ninety seven lakh fifty seven.

(d) 89322602

Ans → 8, 93, 22, 602

Eight crore ninety three lakh twenty two thousand six hundred two.

(e) 4503217

Ans → 45, 03, 217

Forty five lakh three thousand two hundred seventeen.

(f) 90032045

Ans → 9, 00, 32, 045

Nine crore thirty two thousand forty five.

⑧ Insert commas suitably and write the names according to International system of Numeration.

(a) 89832081

Ans → 89, 832, 081

Eighty nine million eight hundred thirty two thousand eighty one.

(b) 6543874

Ans → 6, 543, 874

Six million five hundred forty three thousand three hundred seventy four.

(c) 88976306

Ans → 88, 976, 306

Eighty eight million nine hundred seventy six thousand three hundred six.

(d) 9860001

Ans → 9, 860, 001

Nine million Eight hundred sixty thousand one.

(e) 90032045

Ans → 90,032,045

Ninety million thirty two thousand forty five.

(f) 4503217

Ans → 4,503,217

Four million five hundred three thousand two hundred seventeen.

(9) Write the number names as numerals.

(a) Seven lakh fifty four thousand.

Ans → 7,54,000

(b) Nine Crore fifty three lakh seventy four thousand five hundred twenty three.

Ans → 9,53,74,523

(c) Six hundred forty seven thousand five hundred twenty five

Ans → 647,525

(d) Seventy two million three hundred thirty two thousand one hundred twelve.

Ans → 72,332,112

(e) Fifty eight million four hundred twenty three thousand two hundred two

Ans → 58,423,202

(f) Twenty three lakh thirty thousand ten.

Ans → 23,30,010.

(10) How many eight digit numbers are there in all

Ans → largest 8-digit number = 99999999

largest 7-digit number = 9999999

$$\begin{array}{r} 99999999 \\ - 9999999 \\ \hline 90000000 \end{array}$$

Eight digit numbers are = 90000000

(11) Fill in the blanks:

(a) 1 Lakh = ten ten thousand

(b) 1 Million = ten hundred thousand.

(c) 1 Crore = ten ten lakh

(d) 1 Crore = ten million

(e) 1 Million = ten lakh

EXERCISE 1.2

① Convert the following measurements as directed:

(a) 5 Km into metre

Ans → Km $\xrightarrow{\times 10}$ hm $\xrightarrow{\times 10}$ dam $\xrightarrow{\times 10}$ m dm cm mm

$$5 \text{ Km} = 5 \times 10 \times 10 \times 10 \text{ m} = 5000 \text{ metre}$$

(b) 35 Km into metre.

$$\text{Ans} \rightarrow 35 \text{ Km} = 35 \times 10 \times 10 \times 10 \text{ metre} = 35000 \text{ metre}$$

(c) 2000 milligram into gram.

Ans → Kilo Hecto Deca Gram $\xleftarrow{\div 10}$ Deci $\xleftarrow{\div 10}$ Centi $\xleftarrow{\div 10}$ Milli

$$2000 \text{ milligram} = \frac{2000}{10 \times 10 \times 10} \text{ gm.} = 2 \text{ gm.}$$

(d) 500 decigram into gram.

$$\text{Ans} \rightarrow 500 \text{ decigram} = \frac{500}{10} \text{ gm} = 50 \text{ gm.}$$

(e) 2000 millilitre into litre

Ans → Kilo Hecto Deca litre $\xleftarrow{\div 10}$ deci $\xleftarrow{\div 10}$ centi $\xleftarrow{\div 10}$ Milli

$$2000 \text{ millilitre} = \frac{2000}{10 \times 10 \times 10} \text{ litre} = 2 \text{ litre.}$$

(f) 12 Kilolitre into litre.

$$\text{Ans} \rightarrow 12 \text{ Kilolitre} = 12 \times 10 \times 10 \times 10 \text{ litre} = 12000 \text{ litre.}$$

(2) In an election, the successful candidate registered 6317 votes whereas his nearest rival could attain only 3761 votes. By what margin did the successful candidate defeat his rival?

Ans → Difference in votes = $6317 - 3761$

$$\begin{array}{r} \textcircled{5} \textcircled{12} \textcircled{11} \\ 6317 \\ - 3761 \\ \hline 2556 \end{array} = 2556 \text{ Ans}$$

(3) A monthly magazine having 37 pages is published on 20th day of each month. This month 23791 copies were printed. Tell us how many pages were printed in all?

Ans:— No. of pages in one copy of magazine = 37
No. of pages in 23791 copies = 37×23791

$$\begin{array}{r} 23791 \\ \times 37 \\ \hline 166537 \\ 71373 \times \\ \hline 880267 \end{array} = 880267$$

- ④ A shopkeeper has 37 reams. One ream contains 480 pages and he wants to make quires of all these sheets to sell in retail. One quire of sheets contains 24 sheets. How many quires will be made?

Ans → No. of sheets in 37 reams = 37×480

= 17760

No. of quires of 24 sheets = $17760 \div 24$

= 740

$$\begin{array}{r} 480 \\ \times 37 \\ \hline 3360 \\ 1440 \times \\ \hline 17760 \end{array}$$

$$\begin{array}{r} 740 \\ 24 \overline{) 17760} \\ \underline{168} \\ 96 \\ \underline{96} \\ 00 \end{array}$$

- ⑤ Veerpal serves milk to the guests in glasses of capacity of 250 ml each. Suppose that the glasses are filled to capacity and there was 5 litre that got consumed. How many guests were served with milk?

Ans → 5 litre = $5 \times 1000 \text{ ml} = 5000 \text{ ml}$

Capacity of 1 glass = 250 ml.

No. of guests = $5000 \div 250$

= 20

$$\begin{array}{r} 20 \\ 250 \overline{) 5000} \\ \underline{500} \\ 00 \\ \underline{0} \\ 00 \\ \underline{00} \\ 00 \end{array}$$

⑥ A box of medicine contain 2,00,000 tablets each weighing 20 mg. What will be total weight of tablets in box?

Ans → Weight of 1 tablet = 20 mg

$$\begin{aligned}\text{Weight of 2,00,000 tablets} &= 20 \times 200000 \text{ mg} \\ &= 4000000 \text{ mg} \\ &= \frac{4000000}{1000 \times 1000} \text{ kg} \\ &= 4 \text{ kg}.\end{aligned}$$

⑦ A bookstore sold books worth Rupees Two lakh eighty five thousand eight hundred ninety one in the first week of June. They sold books worth Rupees Four lakh seven hundred sixty eight in the second week of June. How much was the total sale for two weeks together?

Sol → Total sale of books = 285891 + 400768

$$\begin{array}{r} \textcircled{1} \textcircled{1} \\ 285891 \end{array}$$

$$400768$$

$$\hline 686659$$

$$= 686659 \text{ Ans}$$

- (8) A famous cricket player has so far scored 6978 runs in test matches. He wishes to complete 10,000 runs. How many more runs he needs?

Ans → Runs scored = 6978

Target score = 10,000

More runs needed = $10,000 - 6978$

= 3022

0	9	9	9	10
1	0	0	0	0
	-	6	9	78
		3	0	22

- (9) Surinder has ₹ 78592 with him. He placed an order for purchasing 39 radio sets at ₹ 1234 each. How much money will remain with him after the purchase?

Ans → Cost of 1 radio = ₹ 1234

Cost of 39 radio = ₹ 1234×39

= ₹ 48126

Total Amount = ₹ 78592

Money spend = ₹ 48126

Money remain with him = ₹ $78592 - ₹ 48126$

7	8	5	9	2	=	₹	3	0	4	6	6
-	4	8	1	2							
	3	0	4	6							

1	2	3	4
	x	3	9
		1	1
		0	6
		3	7
		0	2
		4	8
		1	2
		6	6

⑩ A vessel has 3 litre 650 ml of curd. In how many glasses each of 25 ml capacity can be distributed?

$$\begin{aligned}\text{Ans} \rightarrow \text{Curd in vessel} &= 3 \text{ litre } 650 \text{ ml.} \\ &= 3000 \text{ ml} + 650 \text{ ml} \\ &= 3650 \text{ ml.}\end{aligned}$$

Capacity of each glass = 25 ml.

$$\begin{aligned}\text{No. of glasses filled with curd} &= 3650 \div 25 \\ &= 146\end{aligned}$$

$$\begin{array}{r} 25 \overline{) 3650} \quad 146 \\ \underline{25} \\ 115 \\ \underline{100} \\ 150 \\ \underline{150} \\ \hline 0 \end{array}$$

Ex 1.3

(1) Estimate each of the following using general rule

(a) $837 + 987$

Ans $\rightarrow$ Rounding off to hundred place $= 800 + 1000$
 $= 1800$

(b) $783 - 427$

Ans $\rightarrow$ Rounding off to hundred place $= 800 - 400$
 $= 400$

(c) $1291 + 2723$

Ans $\rightarrow$ Rounding off to thousand place $= 1000 + 3000$
 $= 4000$

(d) $22292 - 21496$

Ans $\rightarrow$ Rounding off to ten thousand place $= 30000 - 20000$
 $= 10000$

(2) Estimate the product using general rule:

(a) 898×785

Ans $\rightarrow$ Rounding off to hundred place $= 900 \times 800$
 $= 720000$

(b) 9×795

Ans $\rightarrow$ Rounding off to ten and hundred place $= 10 \times 800$
 $= 8000$

(c) 87×217

Ans $\rightarrow$ Rounding off to ten & hundred place $= 90 \times 300$
 $= 27000$

① 9250×29

Ans → Rounding off to nearest thousand & tens = 9000×30
 $= 270000$

② ~~Estimate~~ Estimate by rounding off to nearest hundred

(a) $439 + 334 + 4317$

Ans → Rounding off to nearest hundred = $400 + 300 + 4300$

$$\begin{array}{r} 400 \\ + 300 \\ + 4300 \\ \hline 5000 \end{array} = 5000$$

(b) $108734 - 47599$

Ans → Rounding off to nearest hundred = $108700 - 47600$

$$\begin{array}{r} 108700 \\ - 47600 \\ \hline 61100 \end{array} = 61100$$

④ (●) Estimate by rounding off to nearest tens:

(a) $439 + 334 + 4317$

Ans → Rounding off to nearest tens = $440 + 330 + 4320$

$$\begin{array}{r} 440 \\ + 330 \\ + 4320 \\ \hline 5090 \end{array} = 5090$$

(b) $108734 - 47599$

Rounding off to nearest tens = $108730 - 47600$

$$\begin{array}{r} 108730 \\ - 47600 \\ \hline 61130 \end{array} = 61130$$

Exercise 1.4

(1) Simplify each of the following

(i) (a) 13×104

$$\begin{aligned} \text{Sol} \rightarrow 13 \times 104 &= 13 \times (100 + 4) \\ &= 13 \times 100 + 13 \times 4 \\ &= 1300 + 52 \\ &= 1352 \end{aligned}$$

$$\begin{array}{r} 1300 \\ + 52 \\ \hline 1352 \end{array}$$

(ii) (b) $102 \times 105 = 102 \times (100 + 5)$

$$\begin{aligned} &= 102 \times 100 + 102 \times 5 \\ &= 10200 + 510 \\ &= 10710 \end{aligned}$$

$$\begin{array}{r} 10200 \\ + 510 \\ \hline 10710 \end{array}$$

(iii) (c) 6×107

$$\begin{aligned} \text{Sol} \rightarrow 6 \times 107 &= 6 \times (100 + 7) \\ &= 6 \times 100 + 6 \times 7 \\ &= 600 + 42 \\ &= 642 \end{aligned}$$

$$\begin{array}{r} 600 \\ + 42 \\ \hline 642 \end{array}$$

(iv) (d) 16×106 ~~16×106~~

$$\begin{aligned} \text{Sol} \rightarrow 16 \times 106 &= 16 \times (100 + 6) \\ &= 16 \times 100 + 16 \times 6 \\ &= 1600 + 96 \\ &= 1696 \end{aligned}$$

$$\begin{array}{r} 1600 \\ + 96 \\ \hline 1696 \end{array}$$

(v) (e) 201×205

$$\begin{aligned} \text{Sol} \rightarrow 201 \times 205 &= 201 \times (200 + 5) \\ &= 201 \times 200 + 201 \times 5 \\ &= 40200 + 1005 \\ &= 41205 \end{aligned}$$

$$\begin{array}{r} 40200 \\ + 1005 \\ \hline 41205 \end{array}$$

(f) 22×102

Sol $\rightarrow 22 \times 102 = 22 \times (100 + 2)$
 $= 22 \times 100 + 22 \times 2$
 $= 2200 + 44$
 $= 2244$

$$\begin{array}{r} 2200 \\ + 44 \\ \hline 2244 \end{array}$$

(g) $6 \times (4 + 3)$

Sol $\rightarrow 6 \times (4 + 3) = 6 \times 4 + 6 \times 3$
 $= 24 + 18$
 $= 42$

$$\begin{array}{r} 24 \\ + 18 \\ \hline 42 \end{array}$$

(h) $(17 - 9) \times 3$

Sol $\rightarrow (17 - 9) \times 3 = 17 \times 3 - 9 \times 3$
 $= 51 - 27$
 $= 24$

$$\begin{array}{r} 51 \\ - 27 \\ \hline 24 \end{array}$$

(i) $(20 + 4) \div 2$

Sol $\rightarrow (20 + 4) \div 2 = 24 \div 2$
 $= 12$

ROMAN NUMERALS

Romal Symbols	I	V	X	L	C	D	M
Numerals corresponding in Hindu Arabic System	1	5	10	50	100	500	1000

EXERCISE 1.5

(1) Which of the following are meaningless:

(a) IC

Ans → It is Meaningless because I can be subtracted from V and X

(b) VD

Ans → It is meaningless because V can never be subtracted

(c) XCVII

Ans → It is meaningful because as per rules

$$XCVII = 100 - 10 + 5 + 2 = 97$$

(d) IVC

Ans → It is meaningless because V and I can't be subtracted from C

(e) XM

Ans → It is meaningless because X can be subtracted from L and C.

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② Write the following in Hindu Arabic Numerals.

(a) XXV

Sol $\rightarrow$ XXV = $10 + 10 + 5 = 25$

(b) XLV

Sol $\rightarrow$ XLV = $50 - 10 + 5 = 45$

(c) LXXIX

Sol $\rightarrow$ LXXIX = $50 + 10 + 10 + 9 = 79$

(d) XCIX

Sol $\rightarrow$ XCIX = $100 - 10 + 9 = 99$

(e) CLXIV

Sol $\rightarrow$ CLXIV = $100 + 50 + 10 + 4 = 164$

(f) DCLXII

Sol $\rightarrow$ DCLXII = $500 + 100 + 50 + 10 + 2 = 662$

(g) DLXIX

Sol $\rightarrow$ DLXIX = $500 + 50 + 10 + 9 = 569$

(h) DCC LXVI

Sol $\rightarrow$ DCC LXVI = $500 + 200 + 50 + 10 + 5 + 1 = 766$

(i) CDXXXVIII

Sol $\rightarrow$ CDXXXVIII = $500 - 100 + 10 + 10 + 10 + 5 + 3 = 438$

(j) MCCXLVI

Sol $\rightarrow$ MCCXLVI = $1000 + 100 + 100 + 50 - 10 + 5 + 1 = 1246$

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③ Express each of the following as Roman numerals

(a) 29

$$\text{Sol} \rightarrow 29 = 20 + 9 = XXIX$$

(b) 63

$$\text{Sol} \rightarrow 63 = 50 + 10 + 3 = LXIII$$

(c) 94

$$\text{Sol} \rightarrow 94 = 100 - 10 + 4 = XCIV$$

(d) 99 = 100 - 10 + 9

$$\text{Sol} \rightarrow 99 = 100 - 10 + 9 = XCIX$$

(e) 156

$$\text{Sol} \rightarrow 156 = 100 + 50 + 5 + 1 = CLVI$$

(f) 293

$$\text{Sol} \rightarrow 293 = 100 + 100 + 90 + 3 = CCXCIII$$

(g) 472

$$\text{Sol} \rightarrow 472 = 400 + 50 + 20 + 2 = CDLXXII$$

(h) 638

$$\text{Sol} \rightarrow 638 = 500 + 100 + 30 + 5 + 3 = DCXXXVIII$$

(i) 1458

$$\text{Sol} \rightarrow 1458 = 1000 + 400 + 50 + 5 + 3 = MCDLVIII$$

(j) 948

$$\text{Sol} \rightarrow 948 = 900 + 40 + 5 + 3 = CMXLVIII$$

(k) 199

$$\text{Sol} \rightarrow 199 = 100 + 90 + 9 = \text{CXCIX}$$

(l) 499

$$\text{Sol} \rightarrow 499 = 400 + 90 + 9 = \text{CDXCIX}$$

(m) 699

$$\text{Sol} \rightarrow 699 = 500 + 100 + 90 + 9 = \text{DCXCIX}$$

(n) 299

$$\text{Sol} \rightarrow 299 = 100 + 100 + 90 + 9 = \text{CCXCIX}$$

(o) 999

$$\text{Sol} \rightarrow 999 = 900 + 90 + 9 = \text{CMXCIX}$$

(p) 1000

$$\text{Sol} \rightarrow 1000 = \text{M}$$