NCERT solution for Knowing our Numbers

Exercise 1.1

Question 1:

Fill in the blanks:

(a). 1 lakh = _____ ten thousand.

(b). 1 million = _____ hundred thousand.

(c). 1 crore = _____ ten lakhs.

(d). 1 crore = _____ million.

(e). 1 million = _____ lakh.

Answer

a) 1 lakh = _10____ ten thousand

1 lakh = 1,00,000
 = 100 thousand
 = 10 ten thousand

(b). 1 million = _____10_____ hundred thousand.

1 million   = 1,000,000

= 1000 thousand

= 10 hundred thousand

(c). 1 crore = _____10__ ten lakhs.

1 crore = 1,00,00,000

= 100 lakhs

= 10 ten lakh

(d). 1 crore = _____10____ million.

1 crore = 1,00,00,000

Adding commas to the number 10000000 according to the International system, we have

10,000,000 = 10 million

1 crore = 10 million

(e). 1 million = _____10_____ lakh.

1 million = 10,000,000

Adding commas to the number 10000000 according to the Indian system, we have

1,00,00,000 = 1 crore = 100 lakhs

1 million = 100 lakh

Question 2

Place commas correctly and write the numerals:

(a)Seventy-three lakh seventy-five thousand three hundred seven.

(b)Nine crore five lakhs forty-one.

(c)Seven crore fifty-two lakhs twenty-one thousand three hundred two.

(d)Fifty-eight million four hundred twenty-three thousand two hundred two.

(e)Twenty-three lakh thirty thousand ten.

Answer

(a) 73,75,307

(b) 9,05,00,041

(c) 7,52,21,302

(d) 58,423,202

(e) 23,30,010

Question 3

Insert commas suitably and write the names according to Indian System of Numeration:

(a) 87595762

(b) 8546283

(c) 99900046

(d) 98432701

Answer

A	8,75,95,762	Eight crore seventy-five lakh ninety-five thousand seven hundred sixty-two
B	85,46,283	Eighty-five lakh forty-six thousand two hundred eighty-three
C	9,99,00,046	Nine crore ninety-nine lakh forty-six
D	9,84,32,701	Nine crore eighty-four lakh thirty-two thousand seven hundred one

Question 4:

Insert commas suitably and write the names according to International System of Numeration:

(a) 78921092

(b) 7452283

(c) 99985102

(c) 48049831

Answer

A	78,921,092	Seventy-eight million nine hundred twenty-one thousand ninety-twos
B	7,452,283	Seven million four hundred fifty-two thousand two hundred eighty-threes
C	99,985,102	Ninety-nine million nine hundred eighty-five thousand one hundred twos
D	48, 049,831	Forty-eight million forty-nine thousand eight hundred thirty-ones

Exercise 1.2

Question 1

Book exhibition was held for four days in a school. The number of tickets sold at the counter on the first, second, third, and final day was respectively 1094, 1812, 2050, and 2751. Find the total number of tickets sold on all the four days.

Answer

Tickets sold on 1st day = 1094

Tickets sold on 2nd day = 1812

Tickets sold on 3rd day = 2050

Tickets sold on 4th day = 2751

Total tickets sold = 1094 + 1812 + 2050 + 2751

=7707

Total tickets sold = 7,707

Question 2

Shekhar is a famous cricket player. He has so far scored 6980 runs in test matches. He wishes to complete 10, 000 runs. How many more runs does he need?

Answer

Runs scored so far = 6980

Runs Shekhar wants to score = 10,000

More runs required = Runs Shekhar wants to score - Runs scored so far
=10,000 − 6980 =3020

So Shekhar requires 3,020 more runs.

Question 3

In an election, the successful candidate registered 5, 77, 500 votes and his nearest rival secured 3, 48, 700 votes. By what margin did the successful candidate win the election?

Answer

Votes secured by successful candidate = 5,77,500

Votes secured by rival = 3,48,700

Margin = 5,77,500 − 3,48,700

=228800

So Margin = 2,28,800

Question 4

Kirti bookstore sold books worth Rs 2,85,891 in the first week of June and books worth Rs 4,00,768 in the second week of the month. How much was

the sale for the two weeks together? In which week was the sale greater and by how much?

Answer

Value of Books sold in 1st week = Rs 2,85,891

Value of books sold in 2nd week = Rs 4,00,768

Total sale of books = Sale in 1st week + Sale in 2nd week = 2,85,891 + 4,00,768

=6,86,659
The sale for the two weeks together was 6,86,659.

Since 4,00,768 > 2,85,891, sale in 2nd week was greater than 1st week.

Now difference would be

=4,00,768 - 2,85,891 = 1,14,877

The sale in 2nd week was larger than the sale in 1st week by Rs 1,14,877.

Question 5

Find the difference between the greatest and the least number that can be written using the digits 6, 2, 7, 4, 3 each only once.

Answer

The digits to be used are 6,2,7,4,3

The greatest number can be obtained by writing the digits from the largest to smallest i.e., 7 6 4 2 3

Greatest number = 76432

The least number is obtained by writing the digits from smallest to largest i.e., 2 3 4 6 7

Smallest number = 23467

Difference = 76432 − 23467 76432 − 23467
=52,965

Therefore, the difference between the greatest and the least number that can be written using the digits 6, 2, 7, 4, 3 each only once is 52,965.

Question 6

A machine, on an average, manufactures 2,825 screws a day. How many screws did it produce in the month of January 2006?

Answer

Screws produced the machine in one day = 2,825

Now Days in January = 31

Screws produced in 31 days = 2825 × 31 = 87575

So screws produced during Jan, 06 = 87,575

Question 7

A merchant had Rs 78,592 with her. She placed an order for purchasing 40 radio sets at Rs 1200 each. How much money will remain with her after the purchase?

Answer

Cost of one radio set = Rs 1200

Cost of 40 radio sets = 1200 × 40 = Rs 48000

Money with Merchant = Rs 78,592

Money spent on radio sets= Rs 48,000

Money left = (Money with Merchant) – (Money spent on radio sets)

=78592 − 48000 =30592

So Rs 30,592 will remain with her after the purchase.

Question 8

A student multiplied 7236 by 65 instead of multiplying by 56. By how much was his answer greater than the correct answer? (Hint: Do you need to do both the multiplications?)

Answer

Difference between 65 and 56 = 9

Difference in the answer = 7236 × 9

=65124

We can double check using 7236 × 65 = 4,70,340 and 7236 × 56 = 4,05,216.

Difference is =4,70,340 - 4,05,216

=65,124

Therefore, the answer was greater than the correct answer by 65,124

Question 9

To stitch a shirt, 2m 15 cm cloth is needed. Out of 40 m cloth, how many shirts can be stitched and how much cloth will remain? (Hint: convert data in cm.)

Answer

First convert both the data given into same units

As 1 m = 100 cm

2 m 15 cm = 215 cm

40 m = 40 × 100 = 4000 cm

Cloth required for one shirt = 215 cm

Number of shirts that can be stitched out of 4000 cm = 4000 ÷ 215

	18
215	4000
	215
	1850
	1720
	130

So 18 shirts can be made. 130 cm, i.e. 1 m 30 cm, cloth will remain.

Question 10

Medicine is packed in boxes, each weighing 4 kg 500 g. How many such boxes can be loaded in a van which cannot carry beyond 800 kg?

Answer

As 1 kg = 1000 g

So 4 kg 500 g = 4500 g

Also 800 kg = 800 × 1000 = 800000 g

Number of boxes that can be loaded in the van = 800000 ÷ 4500

	177
4500	800000
	4500
	35000
	31500
	35000
	31500
	3500

So we can say that 177 boxes at maximum can be loaded in the van.

Question 11

The distance between the school and the house of a student's house is 1 km 875 m. Every day she walks both ways. Find the total distance covered by her in six days.

Answer

Distance between school and house = 1 km 875 m

Now, 1 km = 1000 m

1 km 875 m = 1875 m

Distance covered each day = 1875 × 2 = 3750 m

Distance covered in 6 days = 3750 × 6 =22500 m

So distance covered in 6 days = 22,500 m = 22.5 km or 22 km 500 m

Question 12

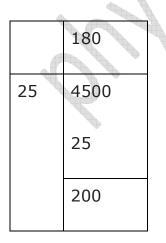A vessel has 4 liters and 500 ml of curd. In how many glasses, each of 25 ml capacity, can it be filled?
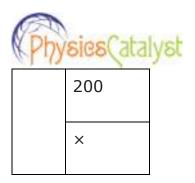
Answer

Converting into same units (1 l = 1000 ml)

Capacity of vessel = 4 l 500 ml = 4500 ml

Capacity of a glass = 25 ml

Number of glasses that can be filled = 4500 ÷ 25

	180
25	4500
	25
	200

	200
	×

So 180 glasses can be filled.

Exercise 1.3

Question 1

Estimate each of the following using general rule:

(a) 730 + 998

(b) 796 − 314

(c) 12, 904 + 2, 888

(d) 28, 292 − 21, 496

Make ten more such examples of addition, subtraction and estimation of their outcome.

Answer

(a) 730 + 998

Rounding off to nearest hundreds we get   730 rounds off to 700 and 998 rounds off to 1000.

=700 + 1000=1700

(b) 796 − 314
Rounding off to nearest hundreds, we get 796 rounds off to 800 and 314 rounds off to 300.

=800-300=500

(c) 12904 + 2822
Rounding off to nearest thousands, we get 12904 rounds off to 13000 and 2822 rounds off to 3000.

=13000+ 3000=16000

(d) 28,296 − 21,496
Rounding off to nearest thousands, we get 28296 rounds off to 28000 and 21496 rounds off to 21000.

=28000-21000=7000

Question 2

Give a rough estimate (by rounding off to nearest hundreds) and also a closer estimate (by rounding off to nearest tens):

(a) 439 + 334 + 4, 317

 (b) 1,08, 734 − 47, 599

(c) 8325 − 491

(d) 4, 89, 348 − 48, 365

Make four more such examples.

Answer

(a) 439 + 334 + 4317

Rounding off to nearest hundreds, 439, 334, and 4317 may be rounded off to 400, 300, and 4300 respectively.

So sum would be =400+300+4300=5000

Rounding off to nearest tens, 439, 334, and 4317 may be rounded off to 440, 330, and 4320 respectively.

So sum would be =440+330+4320=5090

(b) 1,08,734 − 47,599
Rounding off to hundreds, 1,08,734 and 47,599 may be rounded off to 1,08,700 and 47,600 respectively.

So difference would be= 108700-47600=61100

Rounding off to tens, 1,08,734 and 47,599 may be rounded off to 1,08,730 and 47,600 respectively.

So difference would be=108730-47600=61130

(c) 8325 − 491

Rounding off to hundreds, 8325 and 491 may be rounded off to 8300 and 500 respectively.

Difference would be =8300-500=7800

Rounding off to tens, 8325 and 491 may be rounded off to 8330 and 490 respectively.

Difference would be=8330-490=7840

(d) 4,89,348 − 48,365

Rounding off to hundreds, 489348 and 48365 may be rounded off to 489300 and 48400 respectively.

Difference would be=489300-48400=440900

Rounding off to tens, 489348 and 48365 may be rounded off to 489350 and 48370 respectively.

Difference would be= 489350-48370=440980

Question 3

Estimate the following products using general rule:

(a) 578 × 161

(b) 5281 × 3491

(c) 1291 × 592

(d) 9250 × 29

Answer

(a) 578 × 161

Rounding off by general rule, 598 and 161 may be rounded off to 600 and 200 respectively.

600 × 200=120000

(b) 5281 × 3491

Rounding off by general rule, 5281 and 3491 may be rounded off to 5000 and 3000 respectively.

5000× 3000= 15000000

(c) 1291 × 592
Rounding off by general rule, 1291 and 592 may be rounded off to 1000 and 600 respectively.

1000×600=600000

(d) 9250 × 29
Rounding off by general rule, 9250 and 29 may be rounded off to 9000 and 30 respectively.

9000×30=270000