CHAPTER – 1

KNOWING OUR NUMBERS

EXERCISE 1.1

Q.1 Fill in the blanks:

(a) 1 lakh = …….. ten thousand.
(b) 1 million = …….. hundred thousand.
(c) 1 crore = …… ten lakh.
(d) 1 crore = ……. million.
(e) 1 million = ……. lakh.

Solution: 1

(a) 1 lakh = ….**10**… ten thousand
ten thousand = 10,000
1 lakh = 10000 = 10 × 10000

= 10 ten thousand

1 lakh = ….10… ten thousand

(b) 1 million = …**10**… hundred thousand

hundred thousand = 100000

1 million = 1,000,000

= 10 ×1,00,000

1 million = 10 hundred thousands

(c) 1 crore = ….**10**…. ten lakh

ten lakhs = 1000000

1 crore = 10000000

(d) 1 crore = …**10**…million.
1 million = 1,000,000

1 crore = 1,00,00,000
= 10 × 1,000,000
1 crore = …10…million.

(e) 1 million = …**10**…. lakh.

ten lakh = 10,00,000
1 million = 1,000,000

= 10 × 1,00,00

1 million = …10…. Lakh

Q. 2 Place commas correctly and write the numerals:

a. Seventy-three lakh seventy-five thousand three hundred seven.
b. Nine crore five lakh forty-one.
c. Seven crore fifty-two lakh 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. Seventy-three lakh seventy-five thousand three hundred seven;
Let's break the sentence first,
Seventy-three lakh = 73,00,000
Seventy-five thousand = 75,000
Three hundred and seven = 307
By adding the above numbers, we get,
73, 00,000 + 75,000 + 307
= 73, 00,000 + 75,307
= 73,75,307

b. Nine crores five lakh forty-one
Nine crore = 9,00,00,000

Five lakh = 5,00,000
Forty-one = 41
Now add the above numbers,
9,0000,000 + 5,00,000 + 41
= 9,0000,000 + 5,00,041
= 9,05,00,041

c. Seven crores fifty-two lakh twenty-one thousand three hundred two,
Seven crore = 7,00,00,000
Fifty-two lakh = 52,00,000
Twenty-one thousand = 21,000
Three hundred and two = 302
By adding all the above numbers, we get,
= 7,00,00,000 + 52,00,000 + 21,000 + 302
= 7,0000,000 + 52,00,000 + 21,302
= 7,0000,000 + 52,21,302
= 7,52,21,302

d. Fifty-eight million four hundred twenty-three thousand two hundred two
Fifty-eight million = 58,000,000
Four hundred twenty-three thousand = 4 23,000
Two hundred and two = 202
By adding above numbers we get,
= 58,000,000 + 4,23,000 + 202
= 58,000,000 + 4,23,202
= 58,423,202

e. Twenty-three lakh thirty thousand ten,
Twenty-three lakh = 23,00,000
Thirty thousand = 30,000

Ten = 10
Add the above numbers,
= 23,00,000 + 30,000 + 10
= 23,00,000 + 30,010
= 23,30,010

Q.3 Insert commas suitably and write the names according to Indian System of Numeration:
(a) 87595762 (b) 8546283

(c) 99900046 (d) 98432701

Answer:

According to the Indian Numeral system, each digit has different value according to their place.

For example – 225

2 is used twice but it has a different value in both the places, first 2 is in hundreds and second 2 represents the tens.

a. 8, 75,95,762 = Eight crore seventy-five lakh ninety-five thousand seven hundred sixty-two.
Let's simplify it,
= 8, 0000,000 + 7, 000,000 + 5, 00,000 + 90,000 + 5, 000 + 700 + 60 + 2
= 8, 0000,000 + 7, 000,000 + 5, 00,000 + 90,000 + 5, 000 + 700 + sixty-two
= 8, 0000,000 + 7, 000,000 + 5, 00,000 + 90,000 + 5, 000 + seven hundred sixty-two
= 8, 0000,000 + 7, 000,000 + 5, 00,000 + 90,000 + five thousand seven hundred sixty-two
= 8, 0000,000 + 7, 000,000 + 5, 00,000 + ninety-five thousand seven hundred sixty-two

= 8, 0000,000 + 7, 000,000 + five lakh ninety-five thousand seven hundred sixty-two
= 8, 0000,000 + seventy-five lakh ninety-five thousand seven hundred sixty-two
= Eight crore seventy-five lakh ninety-five thousand seven hundred sixty-two

b. 85,46,283
By simplifying it we get,
= 8, 000,000 + 5, 00,000 + 40, 000 + 6,000 + 200 + 80 + 3
= 8, 000,000 + 5, 00,000 + 40, 000 + 6,000 + 200 + 83
= 8, 000,000 + 5, 00,000 + 40, 000 + 6,000 + 283
= 8, 000,000 + 5, 00,000 + 40, 000 + 6,283
= 8, 000,000 + 5, 00,000 + 46,283
= 8, 000,000 + 5, 46,283
= 85, 46,283
Therefore 85,46,283
= Eight- five lakh forty-six thousand two hundred eighty-three

c. 9,99,00,046
By simplifying it we get,
= 9, 00,00,000 + 9, 000,000 + 9, 00,000 + 0,000 + 000 + 46
= 9, 00,00,000 + 9, 000,000 + 9, 00,046
= 9, 00,00,000 + 99,00,046
= 9,99,00,046
Therefore, 9,99,00,046 = nine crore ninety-nine lakh forty-six

d. 9, 84,32,701
By simplifying it we get,
= 9, 00,00,000 + 80,00,000 + 4,00,000 + 30,000 + 2,000 + 700 + 00 + 1
= 9, 00,00,000 + 80,00,000 + 4,00,000 + 30,000 + 2,000 + 701
= 9, 00,00,000 + 80,00,000 + 4,00,000 + 30,000 + 2,701

= 9, 00,00,000 + 80,00,000 + 4,00,000 + 32,701
= 9, 00,00,000 + 80,00,000 + 4,32,701
= 9, 00,00,000 + 84,32,701
= 9, 84,32,701
Therefore, 9, 84,32,701 = nine crore eighty four lakh thirty two thousand seven hundred one.

Q.3 Insert commas suitably and write the names according to International System of Numeration:
(a) 78921092 (b) 7452283

(c) 99985102 (d) 48049831

Answer:

a. 78921092
78,921,092 = seventy-eight million nine hundred twenty-one thousand ninety-two
b. 7452283
7,452,283 = seven million four hundred fifty-two thousand two hundred eighty-three
c. 99985102
99,985,102 = ninety-nine million nine hundred eighty-five thousand one hundred two
d. 48049831
48,049,831 = forty-eight million forty-nine thousand eight hundred thirty-one.

EXERCISE 1.2

Q. 1 A 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 the first day of exhibition = 1094

Tickets sold on the second day of the exhibition = 1812

Tickets sold on the third day of the exhibition = 2050

Tickets sold on the last day of the exhibition = 2751

Now,

To get total number of tickets we, add the all above tickets sold,

By adding we get,

= 1094 + 1812 + 2050 + 2751

= 7707

So, total tickets sold = 7,707

Q. 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:

The number of runs scored by Shekhar so far = 6980

The number of runs shekhar wants to score = 10,000

Thus, the number of runs required = 10,000 – 6980

= 3020 runs

So,

Shekhar required 3,020 more runs to complete his 10,000 runs.

Q.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:

Successful candidate secured = 5, 77,500 votes

Rival candidate secured = 3, 48,700 votes

The margin = 5,77,500 – 3,48,700

= 2,28,800 votes

The successful candidate has won the election by the margin of 2, 28,800 votes.

Q.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 the first week = Rs 2, 85,891

Value of books sold in the second week = Rs 4, 00,768

Total sale in the two weeks = sale in the first week + sale in the second week

Total sale for the two weeks = 2,85,891 + 4,00,768 = 6,86,659

Clearly, from the sales figures, we can say that the Sales in the second week is greater than the first week.

Difference = 4,00,768 – 2,85,891 = 1,14,877

The amount by which the Sale in the second week is higher than the sale in the first week by Rs 1, 14,877.

Q. 5 Find the difference between the greatest and the least number that can be written using the digits 6, 2, 7, 4 and 3 each only once.

Answer:

Trick: To find the greatest number arrange the given numbers in descending order and to get the smallest number, arrange the given digits in ascending order.

On using the digits: 6, 2, 7, 4 and 3 and only once, we get,

Greatest number = 76432

Smallest number = 23467

Now, the difference between the greatest and the least number = 76432 – 23467 = 52965

Q.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 by machine in one day = 2, 825

Days in January = 31 days

Screws produced in 31 days = 2, 825 × 31

= 87575 screws

So,

Screws produced in January 2006 = 87575

Q. 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:

Total money merchant has = 78, 592 Rs

Cost of one radio set = 1200 Rs

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

So,

Total money spent on radio sets = 48, 000 Rs

Money left with the merchant = 78,592 – 48,000 = 30,592 Rs

Therefore, total money left with her is 30,592 Rs after the purchase.

Q.8 A student multiplied 7236 by 65 instead of multiplying by 56. By how much was his answer greater than the correct answer?

Answer:

The Student multiplied 7236 by 65 instead of 56;

He gets, a wrong answer = 7236 × 65 = 470340

But, the right answer he should have got = 7236 × 56 = 405216

Now the difference in the answers = 470340 – 405216 = 65124

So,

His answer was greater than the right answer by 65124.

Q. 9 To stitch a shirt, 2 m 15 cm cloth is needed. Out of 40 m cloth, how many shirts can be stitched and how much cloth will remain?

Answer:

We know, 1 m = 100cm

Therefore, 2 m 15 cm = 215cm

40 m = 40×100 cm = 4000 cm

Now the cloth required for one shirt = 215 cm

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

$$
\begin{array}{r@{\,}l}
 & 18 \\
215 \big) & 4000 \\
 & \underline{215} \\
 & 1850 \\
 & \underline{1720} \\
 & \underline{130\ }
\end{array}
$$

Therefore, 18 shirts can be made from 4000cm long cloth. Out of 4000 cm, 130cm cloth will remain which is 1m 30cm.

Q.10 Medicine is packs 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:

We know, 1 kg = 1000g

Thus, 4 kg 500g = 4500g

And, 800 kg = 800×1000 = 8,00,000g

Weight of one box = 4500g

The total weight that can be carried by van = 8,00,000 g

Thus, the number of boxes that can be loaded in the van = 800000 ÷ 4500

```
      177
4500)800000
     4500
     35000
     31500
      35000
      31500
       3500
```

Hence, 177 boxes can be loaded in the van.

Q. 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 the school and her house = 1km 875m

1 km = 1000m

1km 875m = 1875m

The distance she covered each day = 1875×2×6

```
  111
  1875
  × 12
   11
 13750
 1875×
 22,500
```

= 22500 m

Therefore, distance covered in 6 days = 22,500m which is 22.5 km or we can say 22km 500m.

Q. 12 A vessel has 4 litres and 500 ml of curd. In how many glasses, each of 25 ml capacity, can it be filled?

Answer:

Capacity of vessel = 4 l 500ml

1l= 1000 ml

41500 ml = 4500 ml

Capacity of a glass = 25 ml

Number of glasses required to fill the vessel = 4500 ÷ 25

```
      180
25)4500
   25
   200
   200
   ×
```

So,

180 glasses needed to fill the vessel.

EXERCISE – 1. 3

Q. 1 Estimate each of the following using general rules:

(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
By rounding off to hundreds,
730 rounds off to 700 and,
998 rounds off to 1000,
So we have;
= 700 +1000
= 1700

b. 796 – 314
By rounding off to hundreds,
796 rounds off to 800 and,
314 rounds off to 300
We get,
= 800 – 300
= 500

c. 12904 + 2822
By rounding off to thousands,
12904 rounds off to 13000 and,
2822 rounds off to 3000.
We get,
= 13000 + 3000

= 16000

d. 28,296 – 21, 496

By rounding off to nearest thousands,

28,296 rounds off to 28000

21,496 rounds off to 21,000

We get,

= 28,000 – 21,000

= 7,000

Q. 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 + 4,317

Rounding off to nearest hundreds,

439 rounds off to 400

334 rounds off to 300

And 4317 rounds off to 4300,

We get,

= 400 + 300 + 4300

= 5000

By rounding off to nearest tens,

439 rounds off to 440

334 rounds off to 330

And 4317 rounds off to 4320,

We get,
= 440+330+4320
= 5090

b. 1,08,734 – 47,599
Rounding off to nearest hundreds,
1, 08,734 rounds off to 1,08,708
47,599 rounds off to 47,600
We get,
= 1, 08,700 – 47,600
= 61100
Rounding off to nearest tens,
1, 08,734 rounds off to 1, 08,730
47,599 rounds off to 47,600
We get,
= 1, 08,730 – 47,600
= 61130

c. 8325 – 491
Rounding off to nearest hundreds,
8325 rounds off to 8300
491 rounds off to 500
We get,
= 8300 – 500
= 7800
Rounding off to nearest tens,
8325 rounds off to 8330
491 rounds off to 490
We get,
= 8330 – 490
= 7840

d. 4,89,348 – 48,365
Rounding off to nearest hundreds,

4,89,348 rounds off to 4,89,300
48,365 rounds off to 48,400
We get,
= 489300 – 48400
= 440900
Rounding off to nearest tens,
4,89,348 rounds off to 4,89,350
48,365 rounds off to 48,370
We get,
= 489350 – 48370
= 440980

Q. 3 Estimate the following products using general rule:
(a) 578 × 161
(b) 5281 × 3491
(c) 1291 × 592
(d) 9250 × 29
Make four more such examples.

Answer:

a. 578×161
Rounding off by general rule,
578 rounds off to 600
161 rounds off to 200,
So,
= 600×200 = 120000

b. 5281×3491
Rounding off by the general rule,
5281 rounds off to 5000
3491 rounds off to 3500
So,
= 5000×3500

= 17500000

c. 1291×592

Rounding off by general rule,

1291 rounds off to 1300

592 rounds off to 600

So,

= 1300×600

= 780000

d. 9250×29

Rounding off by general rule,

9250 rounds off to 9000

29 rounds off to 30

So,

= 9000 × 30

= 27000