Exercise 1.1   PAGE NO: 12

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.

Solutions:
(a) 1 lakh = 10 ten thousand
        = 1,00,000
(b) 1 million = 10 hundred thousand
        = 10,00,000
(c) 1 crore = 10 ten lakh
        = 1,00,00,000
(d) 1 crore = 10 million
        = 1,00,00,000
(e) 1 million = 10 lakh
        = 1,000,000

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.

Solutions:
(a) The numeral of seventy three lakh seventy five thousand three hundred seven is 73,75,307
(b) The numeral of nine crore five lakh forty one is 9,05,00,041
(c) The numeral of seven crore fifty two lakh twenty one thousand three hundred two is 7,52,21,302
(d) The numeral of fifty eight million four hundred twenty three thousand two hundred two is
      5,84,23,202
(e) The numeral of twenty three lakh thirty thousand ten is 23,30,010

3. Insert commas suitably and write the names according to Indian System of Numeration:
(a) 87595762 (b) 8546283 (c) 99900046 (d) 98432701 Solutions:
(a) 87595762 – Eight crore seventy five lakh ninety five thousand seven hundred sixty two
(b) 8546283 – Eighty five lakh forty six thousand two hundred eighty three
(c) 99900046 – Nine crore ninety nine lakh forty six
(d) 98432701 – Nine crore eighty four lakh thirty two thousand seven hundred one

4. Insert commas suitably and write the names according to International System of Numeration:
(a) 78921092
(b) 7452283
(c) 99985102
(d) 48049831

Solutions:
(a) 78921092 – Seventy eight million nine hundred twenty one thousand ninety two
(b) 7452283 – Seven million four hundred fifty-two thousand two hundred eighty three
(c) 99985102 – Ninety-nine million nine hundred eighty five thousand one hundred two
(d) 48049831 – Forty-eight million forty-nine thousand eight hundred thirty-one

EDUGROSS
WISDOMISING KNOWLEDGE

EXERCISE 1.2   PAGE NO: 16

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.

Solutions:
Number of tickets sold on 1st day = 1094
Number of tickets sold on 2nd day = 1812
Number of tickets sold on 3rd day = 2050
Number of tickets sold on 4th day = 2751
Hence, number of tickets sold on all the four days = 1094 + 1812 + 2050 + 2751 = 7707 tickets

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?

Solutions:
Shekhar scored = 6980 runs
He want to complete = 10000 runs
Runs need to score more = 10000 – 6980 = 3020
Hence, he need 3020 more runs to score

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?

Solutions:
No. of votes secured by the successful candidate = 577500
No. of votes secured by his rival = 348700
Margin by which he won the election = 577500 – 348700 = 228800 votes
∴ Successful candidate won the election by 228800 votes

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?
Solutions:
Price of books sold in June first week = Rs 285891
Price of books sold June second week = Rs 400768
No. of books sold in both weeks together = Rs 285891 – Rs 400768 = Rs 686659
The sale of books is the highest in the second week
Difference in the sale in both weeks = Rs 400768 – Rs 285891 = Rs 114877 ∴
Sale in second week was greater by Rs 114877 than in the first week.

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

Solutions:
Digits given are 6, 2, 7, 4, 3
Greatest 5-digit number = 76432
Least 5-digit number = 23467
Difference between the two numbers = 76432 – 23467 = 52965
∴ The difference between the two numbers is 52965

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

Solutions:
Number of screws manufactured in a day = 2825
Since January month has 31 days
Hence, number of screws manufactured in January = 31 × 2825 = 87575 Hence,
machine produce 87575 screws in the month of January 2006

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?

Solutions:
Total money the merchant had = Rs 78592
Number of radio sets she placed an order for purchasing = 40 radio sets
Cost of each radio set = Rs 1200
So, cost of 40 radio sets = Rs 1200 × 40 = Rs 48000
Money left with the merchant = Rs 78592 – Rs 48000 = Rs 30592
Hence, money left with the merchant after purchasing radio sets is Rs 30592

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

Solutions:
Difference between 65 and 56 i.e (65 – 56) = 9
The difference between the correct and incorrect answer = 7236 × 9 = 65124
Hence, by 65124, the answer was greater than the correct answer

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?

Solutions:
Given

Total length of the cloth = 40 m
= 40 × 100 cm = 4000 cm
Cloth required to stitch one shirt = 2 m 15 cm
= 2 × 100 + 15 cm = 215 cm
Number of shirts that can be stitched out of 4000 cm = 4000 / 215 = 18 shirts Hence
18 shirts can be stitched out of 40 m and 1m 30 cm of cloth is left out

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

Solutions:
Weight of one box = 4 kg 500 g = 4 × 1000 + 500
= 4500 g
Maximum weight carried by the van = 800 kg = 800 × 1000
= 800000 g
Hence, number of boxes that can be loaded in the van = 800000 / 4500 = 177 boxes

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

Solutions:
Distance covered between school and house = 1 km 875 m = 1000 + 875 = 1875 m
Since, the student walk both ways.
Hence, distance travelled by the student in one day = 2 × 1875 = 3750 m
Distance travelled by the student in 6 days = 3750 m × 6 = 22500 m = 22 km 500 m
∴ Total distance covered by the student in six days is 22 km and 500 m

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

Solutions:
Quantity of curd in the vessel = 4 l 500 ml = 4 × 1000 + 500 = 4500 ml Capacity
of 1 glass = 25 ml
∴ Number of glasses that can be filled with curd = 4500 / 25 = 180 glasses Hence,
180 glasses can be filled with curd.

EXERCISE 1.3

1. Estimate each of the following using general rule:
(a) 730 + 998 (b) 796 – 314 (c) 12904 + 2888   (d) 28292 – 21496
 Make ten more such examples of addition, subtraction and estimation of their outcome.
Solutions:
(a) 730 + 998
Round off to hundreds
730 is rounds off to 700
998 is rounds off to 1000
Hence, 730 + 998 = 700 + 1000 = 1700

(b) 796 – 314
Round off to hundreds
796 is rounds off to 800
314 is rounds off to 300
Hence, 796 – 314 = 800 – 300 = 500

(c) 12904 + 2888
Round off to thousands
12904 is rounds off to 13000
2888 is rounds off to 3000
Hence, 12904 + 2888 = 13000 + 3000 = 16000

(d) 28292 - 21496
Round off to thousands
28292 is round off to 28000
21496 is round off to 21000
Hence, 28292 – 21496 = 28000 – 21000 = 7000

Ten more such examples are
(i)   330 + 280 = 300 + 300 = 600
(ii)   3937 + 5990 = 4000 + 6000 = 10000
(iii) 6392 – 3772 = 6000 – 4000 = 2000
(iv)   5440 – 2972 = 5000 – 3000 = 2000
(v)   2175 + 1206 = 2000 + 1000 = 3000
(vi)   1110 – 1292 = 1000 – 1000 = 0
(vii) 910 + 575 = 900 + 600 = 1500
(viii) 6400 – 4900 = 6000 – 5000 = 1000
(ix)   3731 + 1300 = 4000 + 1000 = 5000
(x)   6485 – 4319 = 6000 – 4000 = 2000

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 + 4317　　　**(b) 108734 – 47599**　　**(c) 8325 – 491**　　　**(d) 489348 – 48365 Make four more such examples.**
Solutions:
(a)　　439 + 334 + 4317
　　　　Rounding off to nearest hundreds
　　　　439 + 334 + 4317 = 400 + 300 + 4300
　　　　= 5000
　　　　Rounding off to nearest tens
　　　　439 + 334 + 4317 = 440 + 330 + 4320
　　　　= 5090

(b)　　108734 – 47599
　　　　Rounding off to nearest hundreds
　　　　108734 – 47599 = 108700 – 47600
　　　　= 61100
　　　　Rounding off to nearest tens
　　　　108734 – 47599 = 108730 – 47600
　　　　= 61130

(c)　　8325 – 491
　　　　Rounding off to nearest hundreds
　　　　8325 – 491 = 8300 – 500
　　　　= 7800
　　　　Rounding off to nearest tens
　　　　8325 – 491 = 8330 – 490
　　　　= 7840

(d)　　489348 – 48365
　　　　Rounding off to nearest hundreds
　　　　489348 – 48365 = 489300 – 48400
　　　　= 440900
　　　　Rounding off to nearest tens
　　　　489348 – 48365 = 489350 – 48370
　　　　= 440980

　　　　Four more examples are as follows
(i)　　4853 + 662
　　　　Rounding off to nearest hundreds
　　　　4853 + 662 = 4800 + 700
　　　　= 5500

Rounding off to nearest tens
4853 + 662 = 4850 + 660
= 5510

(ii)   775 – 390
Rounding off to nearest hundreds
775 – 390 = 800 – 400
= 400
Rounding off to nearest tens
775 – 390 = 780 – 400
380

(iii)   6375 – 2875
Rounding off to nearest hundreds
6375 – 2875 = 6400 – 2900
= 3500
Rounding off to nearest tens
6375 – 2875 = 6380 – 2880
3500

(iv)   8246 – 6312
Rounding off to nearest hundreds
8246 – 6312 = 8200 – 6300
1900
Rounding off to nearest tens
8246 – 6312 = 8240 – 6310
= 1930

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.
Solutions:
(a)   578 × 161
Rounding off by general rule
598 and 161 rounded off to 600 and 200 respectively
          600
       × 200
     _____

       120000
     _____

(b) 5281×3491

Rounding off by general rule

5281 and 3491 rounded off to 5000 and 3500 respectively

$$
\begin{array}{r}
5000 \\
\times\ 3500 \\
\hline
17500000 \\
\hline
\end{array}
$$

(c) 1291×592

Rounding off by general rule

1291 and 592 rounded off to 1300 and 600 respectively

$$
\begin{array}{r}
1300 \\
\times\ \ 600 \\
\hline
780000 \\
\hline
\end{array}
$$

(d) 9250×29

Rounding off by general rule

9250 and 29 rounded off to 9000 and 30 respectively

$$
\begin{array}{r}
9000 \\
\times\ \ 30 \\
\hline
270000 \\
\hline
\end{array}
$$