## EXERCISE 1.1

1. Fill in the blanks:
(a) 1 lakh $=$ $\qquad$ ten thousand.
(b) 1 million $=$ $\qquad$ hundred thousand.
(c) 1 crore $=$ $\qquad$ ten lakhs.
(d) 1 crore $=$ $\qquad$ million.
(e) 1 million $=$ $\qquad$ lakhs.

## Solutions:

(a) 1 lakh $=10$ ten thousand
$=1,00,000$
(b) 1 million $=10$ hundred thousand
$=10,00,000$
(c) 1 crore $=10$ ten lakhs
$=1,00,00,000$
(d) 1 crore $=10$ million
$=1,00,00,000$
(e) 1 million $=10$ lakhs
$=1,000,000$
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 the Indian System of Numeration:
(a) 87595762 (b) 8546283 (c) 99900046 (d) 98432701

## Solutions:

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

## Solutions:

(a) 78,921,092 - Seventy eight million nine hundred twenty one thousand ninety two
(b) 7,452,283 - Seven million four hundred fifty-two thousand two hundred eighty three
(c) $99,985,102$ - Ninety-nine million nine hundred eighty five thousand one hundred two
(d) 48,049,831 - Forty-eight million forty-nine thousand eight hundred thirty-one

## EXERCISE 1.2

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 four days.

## Solutions:

Number of tickets sold on 1st day $=1094$
Number of tickets sold on 2 nd day $=1812$

Number of tickets sold on 3rd day $=2050$
Number of tickets sold on 4th day $=2751$

Hence, the total number of tickets sold on all 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 $\mathbf{1 0 , 0 0 0}$ runs. How many more runs does he need?

## Solutions:

Shekhar scored $=6980$ runs

He wants to complete $=10000$ runs
Runs needed to score more $=10000-6980=3020$

Hence, he needs 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
$\therefore$ The 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 the first week of June $=$ Rs 285891

Price of books sold in the second week of June $=$ 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
$\therefore$ Sale in the 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 $\mathbf{6 , 2}$, 7,4 , and 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 $=76432-23467=52965$
$\therefore$ The difference between the two numbers is 52965 .
6. A machine, on 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,
The number of screws manufactured in January $=31 \times 2825=87575$
Hence, the machine produced 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
The 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 $1200 \times 40=$ 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 $=7236 \times 9=65124$
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
The total length of the cloth $=40 \mathrm{~m}$
$=40 \times 100 \mathrm{~cm}=4000 \mathrm{~cm}$
Cloth required to stitch one shirt $=2 \mathrm{~m} 15 \mathrm{~cm}$
$=2 \times 100+15 \mathrm{~cm}=215 \mathrm{~cm}$
Number of shirts that can be stitched out of $4000 \mathrm{~cm}=4000 / 215=18$ shirts
Hence, 18 shirts can be stitched out of 40 m , and 1 m 30 cm of cloth is left.
10. Medicine is packed in boxes, each weighing $4 \mathrm{~kg} \mathrm{500g}$. How many such boxes can be loaded in a van which cannot carry beyond 800 kg ?

## Solutions:

Weight of one box $=4 \mathrm{~kg} 500 \mathrm{~g}=4 \times 1000+500$
$=4500 \mathrm{~g}$
Maximum weight carried by the van $=800 \mathrm{~kg}=800 \times 1000$
$=800000 \mathrm{~g}$
Hence, the 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 $\mathbf{1} \mathbf{k m} 875 \mathrm{~m}$. Every day, she walks both ways. Find the total distance covered by her in six days.

## Solutions:

Distance covered between the school and her house $=1 \mathrm{~km} 875 \mathrm{~m}=1000+875=1875 \mathrm{~m}$

Since the student walks both ways,
The distance travelled by the student in one day $=2 \times 1875=3750 \mathrm{~m}$
Distance travelled by the student in 6 days $=3750 \mathrm{~m} \times 6=22500 \mathrm{~m}=22 \mathrm{~km} 500 \mathrm{~m}$
$\therefore$ The 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 $\mathbf{2 5} \mathbf{~ m l}$ capacity, can it be filled?

Solutions:
Quantity of curd in the vessel $=41500 \mathrm{ml}=4 \times 1000+500=4500 \mathrm{ml}$
Capacity of 1 glass $=25 \mathrm{ml}$
$\therefore$ 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 the general rule:
(a) $730+998$ (b) $796-314$ (c) $\mathbf{1 2 9 0 4}+2888$ (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 rounds off to 700
998 rounds off to 1000
Hence, $730+998=700+1000=1700$
(b) $796-314$

Round off to hundreds
796 rounds off to 800
314 rounds off to 300

Hence, $796-314=800-300=500$
(c) $12904+2888$

Round off to thousands
12904 rounds off to 13000
2888 rounds off to 3000
Hence, $12904+2888=13000+3000=16000$
(d) 28292-21496

Round off to thousands
28292 round off to 28000
21496 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 the nearest hundreds) and also a closer estimate (by rounding off to the 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 the nearest hundreds
$439+334+4317=400+300+4300$
$=5000$

Rounding off to the nearest tens
$439+334+4317=440+330+4320$
$=5090$
(b) $108734-47599$

Rounding off to the nearest hundreds
$108734-47599=108700-47600$
$=61100$

Rounding off to the nearest tens
$108734-47599=108730-47600$
$=61130$
(c) $8325-491$

Rounding off to the nearest hundreds
$8325-491=8300-500$
$=7800$
Rounding off to the nearest tens
$8325-491=8330-490$
$=7840$
(d) $489348-48365$

Rounding off to the nearest hundreds
$489348-48365=489300-48400$
$=440900$
Rounding off to the nearest tens
$489348-48365=489350-48370$
$=440980$
Four more examples are as follows:
(i) $4853+662$

Rounding off to the nearest hundreds
$4853+662=4800+700$
$=5500$
Rounding off to the nearest tens
$4853+662=4850+660$
$=5510$
(ii) $775-390$

Rounding off to the nearest hundreds
$775-390=800-400$
$=400$
Rounding off to the nearest tens
$775-390=780-400$
$=380$
(iii) $6375-2875$

Rounding off to the nearest hundreds
$6375-2875=6400-2900$
$=3500$
Rounding off to the nearest tens
$6375-2875=6380-2880$
$=3500$
(iv) $8246-6312$

Rounding off to the nearest hundreds
$8246-6312=8200-6300$
$=1900$
Rounding off to the nearest tens
$8246-6312=8240-6310$
$=1930$
3. Estimate the following products using the general rule:
(a) $578 \times 161$
(b) $5281 \times 3491$
(c) $1291 \times 592$
(d) $9250 \times 29$

Make four more such examples.

## Solutions:

(a) $578 \times 161$

Rounding off by general rule

578 and 161 rounded off to 600 and 200, respectively
600
$\times 200$
$\qquad$
120000
$\qquad$
(b) $5281 \times 3491$

Rounding off by general rule
5281 and 3491 rounded off to 5000 and 3500 , respectively
5000
$\times 3500$
$\qquad$
17500000
(c) $1291 \times 592$

Rounding off by general rule
1291 and 592 rounded off to 1300 and 600 , respectively
1300
$\times 600$
$\qquad$
780000
(d) $9250 \times 29$

Rounding off by general rule
9250 and 29 rounded off to 9000 and 30 , respectively
9000
$\times 30$

270000

Disclaimer:
Dropped Topics - 1.3.1 Estimation, 1.3.2 Estimating to the nearest tens by rounding off, 1.3.3 Estimating to the nearest hundreds by rounding off, 1.3.4 Estimating to the nearest thousands by rounding off, 1.3.5 Estimating outcomes of number situations, 1.3.6 To estimate sum or difference, 1.3.7 To estimate products, 1.4 Using brackets, 1.4.1 Expanding brackets, 1.5 Roman numerals.

