CBSE NCERT Solutions for Class 6 Mathematics Chapter 1

Back of Chapter Questions

Exercise 1.1

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.

Solution:

(A) 10

1 lakh = 1,00,000

10 thousand = 10,000

$\Rightarrow$ 1 lakh = $10 \times 10{,}000$

(B) 10

1 million = 10,00,000

1 hundred thousand = 100,000

$\Rightarrow$ 1 million = $10 \times 100{,}000$

(C) 10

1 crore = 1,00,00,000

10 lakh = 10,00,000

$\Rightarrow$ 1 crore = $10 \times 10{,}00{,}000$

(D) 10

1 crore = 1,00,00,000

1 million = 10,00,000

$\Rightarrow$ 1 crore = $10 \times 10{,}00{,}000$

(E) 10

1 million = 10,00,000

1 million = 10,00,000

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 crores 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.

Solution:

(A) Given, Seventy-three lakh seventy-five thousand three hundred seven.

73,75,307

(B) Given, Nine crore five lakh forty-one.

9,05,00,041

(C) Given, Seven crore fifty-two lakh twenty-one thousand three hundred two.

7,52,21,302

(D) Given, Fifty-eight million four hundred twenty-three thousand two hundred two.

58,423,202

(E) Given, Twenty-three lakh thirty thousand ten.

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

Solution:

(A) 8,75,95,762

Eight crore seventy-five lakh ninety-five thousand seven hundred sixty-two.

(B) 85,46,283

Eight-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 International System of Numeration:

(A) 78921092

(B) 7452283

(C) 99985102

(D) 48049831

Solution:

(A) 78,921,092

Seventy-eight million nine hundred twenty-one thousand ninety-two

(B) 7,452,483

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 the four days.

Solution:

Given,

Number of tickets sold on first day $= 1,094$

Number of tickets sold on second day $= 1,812$

Number of tickets sold on third day $= 2,050$

Number of tickets sold on fourth day $= +2,751$

Total tickets sold $= 7,707$

Therefore, 7,707 tickets were sold on all the four days.

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?

Solution:

Given, 6980 runs scored and to achieve 10,000 runs.

Runs to achieve $= 10,000$

Runs scored $= -6,980$

Runs required $= 3,020$

Therefore, he needs 3,020 more runs.

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?

Solution:

Given,

Total no. of votes secured by successful candidates $= 5,77,000$

Total number of votes secured by his nearest rival $= 3,48,000$

Number of votes secured by successful candidates $= 5,77,500$

Number of votes secured by his nearest rival $= -3.48.700$

Margin between them $= 2,28,800$

Therefore, the successful candidate won by a margin of 2,28,800 votes.

4. Kirti bookstore sold books worth ₹ 2,85,891 in the first week of June and books worth ₹ 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?

Solution:

Given,

Books sold in first week is 2,85,891 and books sold in second week is 4,00,768

Books sold in first week $= 2,85,891$

Books sold in second week $= +4,00,768$

Total books sold $= 6,86,659$

Since, $4,00,768, > 2,85,891$

Therefore, sale of second week is greater than that of first week.

Books sold in second week $= 4,00,768$

Books sold in first week $= -2,85,891$

More books sold in second week $= 1,14,877$

Therefore, 1,14,877 more books were sold in second 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.

Solution:

Given five digits are 6,2,7,4,3.

Greatest five-digit number using digits 6,2,7,4,3 = 76432

Smallest five-digit number using digits $6,2,7,4,3 = -23467$

Difference $= 52965$

Therefore, the difference 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?

Solution:

Given,

Number of screws manufactured in one day is 2,825 .

Number of screws manufactured in one day $= 2,825$

Number of days in the month of January (31 days) $= 2,825 \times 31$

$= 87,575$

Therefore, the machine produced 87,575 screws in the month of January.

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

Solution:

Given,

Cost of one radio $= ₹ 1200$

$\Rightarrow$ Cost of 40 radios $= 1200 \times 40 = ₹ 48,000$

Now,

Total money with merchant $= ₹ 78,592$

Money spent by her $= -₹\ 48{,}000$

Money left with her $= ₹\ 30{,}592$

Therefore, ₹ 30,592 will remain with her after the purchase.

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?

Solution:

Wrong answer $= 7236 \times 65$	**Correct answer** $= 7236 \times 56$
7236	7236
x 65	x 56
36180	43416
43416x	36180x
470340	405216

Therefore, difference in answers $= 470340 - 405216$

$= 65{,}124$

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? (Hint: convert data in cm.)

Solution:

Given,

Cloth required to stitch one shirt

$=$ 2 m 15 cm

$= 2 \times 100$ cm $+ 15$ cm

$= 215$ cm

Length of cloth $= 40\text{m} = 40 \times 100\text{cm} = 4000$ cm

Number of shirts can be stitched $= 4000 \div 215$

$$
\begin{array}{r}
18 \\
215\overline{)\ 4000} \\
-\ 215 \\
\hline
1850 \\
-1720 \\
\hline
130
\end{array}
$$

Therefore, 18 shirts can be stitched and 130 cm (1 m 30 cm) cloth will remain.

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?

Solution:

Given,

The weight of one box $= 4$ kg 500 g $= 4 \times 1000$ g $+ 500$ g $= 4500$ g

Maximum load can be loaded in van $= 800$ kg $= 800 \times 1000$ g $= 800000$ g

Number of boxes $= 800000 \div 4500$

$$
\begin{array}{r}
177 \\
4500\overline{)\,800000} \\
-4500 \\
\hline
35000 \\
-31500 \\
\hline
35000 \\
-31500 \\
\hline
3500
\end{array}
$$

Therefore, 177 boxes can be loaded.

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.

Solution:

Given,

Distance between school and home is 1.875 km.

Distance between school and home $=$ 1.875 km

Distance between home and school $= +1.875$ km

Total distance covered in one day $=$ 3.750 km

Distance covered in six days $= 3.750 \times 6 = 22.500$ km

Therefore, 22 km 500 m distance covered in six days.

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

Solution:

Capacity of curd in a vessel $= 4$ litres 500 ml $= 4 \times 1000$ ml $+ 500$ ml $=$ 4500 ml

Capacity of one glass $= 25$ ml

Number of glasses can be filled $= 4500 \div 25$

$$\begin{array}{r} 180 \\ 25\overline{)\,4500} \\ -25 \\ \hline 200 \\ -200 \\ \hline 0 \end{array}$$

Therefore, 180 glasses can be filled by curd.

EXERCISE 1.3

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.

Solution:

(A) 730 rounds off to 700

998 rounds off to 1000

Estimated sum $= 1700$

(B) 796 rounds off to 800

314 rounds off to 300

Estimated difference $= 500$

(C) 12904 rounds off to 13000

2888 rounds off to 3000

Estimated sum $= 16000$

(D) 28292 rounds off to 28000

21496 rounds off to 21000

Estimated difference $= 7000$

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.

Solution:

(A) 439 rounds off to 400

334 rounds off to 300

4317 rounds off to 4300

Estimated sum $= 5000$

(B) 108734 rounds off to 108700

47599 rounds off to 47600

Estimated difference $= 61100$

(C) 8325 rounds off to 8300

491 rounds off to 500

Estimated difference $= 7800$

(D) 489348 rounds off to 489300

48365 rounds off to 48400

Estimated difference $= 440900$

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.

Solution:

(A) Given, 578×161

578 round off to 600

161 round off to 200

The estimated product $= 600 \times 200 = 1,20,000$

(B) Given, 5281×3491

5281 round of to 5,000

3491 round off to 3,500

The estimated product $= 5,000 \times 3,500 = 1,75,00,000$

(C) Given, 1291×592

1291 round off to 1300

592 round off to 600

The estimated product $= 1300 \times 600 = 7,80,000$

(D) Given, 9250×29

9250 round off to 10,000

29 round off to 30

The estimated product $= 10,000 \times 30 = 3,00,000$