

Class VI Mathematics
Chapter-1 Knowing Your Numbers

Exercise 1.1

1. Fill in the blanks:

- (a) 1 lakh = 10 ten thousand
(b) 1 million = 10 hundred thousand
(c) 1 crore = 10 ten lakh
(d) 1 crore = 10 million
(e) 1 million = 10 lakh

2. Place commas correctly and write the numerals:

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

Ans: 73,75,307

(b) Nine crore five lakh forty-one.

Ans: 9,05,00,041

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

Ans: 7,52,21,302

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

Ans: 58,423,202

(e) Twenty-three lakh thirty thousand ten.

Ans: 23,30,010

3. Insert commas suitable and write the names according to Indian system of numeration:

(a) 87595762

Ans: 8,75,95,762

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

(b) 8546283

Ans: 85,46,283

Eighty-five lakh forty-six thousand two hundred and eighty-three

(c) 99900046

Ans: 9,99,00,046

Nine crore ninety-nine lakh forty-six

(d) 98432701

Ans: 9,84,32,701

Nine crore eighty-four lakh thirty-two thousand seven hundred and one

4. Insert commas suitable and write the names according to international system of numeration:

(a) 78921092

Ans: 78,921,092

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

(b) 7452283

Ans: 7,452,283

Seven million four hundred fifty two thousand two hundred and eighty three

(c) 99985102

Ans: 99,985,102

Ninety nine million nine hundred eighty five thousand one hundred and two

(d) 48049831

Ans: 48,049,831

Forty eight million forty nine thousand eight hundred and thirty one

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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.

Ans:

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?

Ans:

Runs to achieve	=	10,000
Runs scored	=	- 6980
Runs required	=	3020

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?

Ans:

Number of votes secured by successful candidate	=	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 week together? In which week was the sale greater and by how much?

Ans:

Worth of Books sold in first week = ₹ 2,85,891

Worth of Books sold in second week = +₹ 4,00,768

Total worth of books sold = ₹ 6,86,659

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

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

Worth of Books sold in second week = ₹ 4,00,768

Worth of Books sold in first week = - ₹ 2,85,891

Worth of books sold more in second week = ₹ 1,14,877

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.

Ans:

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?

Ans:

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 ₹ 1,200 each. How much money will remain with her after the purchase?

Ans:

$$\begin{aligned} \text{Cost of one radio} &= ₹ 1200 \\ \text{Cost of 40 radios} &= 1200 \times 40 \\ &= ₹ 48,000 \end{aligned}$$

Now,

$$\begin{aligned} \text{Total money with merchant} &= ₹ 78,592 \\ \text{Money spent by her} &= - ₹ 48,000 \\ \text{Money left with her} &= \underline{₹ 30,592} \\ \text{Therefore, ₹ 30,592 will remain with her after the purchase.} \end{aligned}$$

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

Ans:

$$\text{Wrong answer} = 7236 \times 65$$

$$\begin{array}{r} 7236 \\ \times 65 \\ \hline 36180 \\ 43416 \times \\ \hline 470340 \end{array}$$

$$\text{Correct answer} = 7236 \times 56$$

$$\begin{array}{r} 7236 \\ \times 56 \\ \hline 43416 \\ 36180 \times \\ \hline 405216 \end{array}$$

$$\begin{aligned} \text{Difference in answers} &= 470340 - 405216 \\ &= 65,124 \end{aligned}$$

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?

Ans:

$$\begin{aligned} \text{Cloth required to stitch one shirt} &= 2 \text{ m } 15 \text{ cm} \\ &= 2 \times 100 \text{ cm} + 15 \text{ cm} \\ &= 215 \text{ cm} \end{aligned}$$

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

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

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

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

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?

Ans:

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

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

Number of boxes = $800000 \div 4500$

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

Therefore, 177 boxes can be loaded.

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.

Ans:

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 = $3.750 \times 6 = 22.500 \text{ km}$

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?

Ans:

Capacity of curd in a vessel = 4 liters 500 ml = $4 \times 1000 \text{ ml} + 500 \text{ ml} = 4500 \text{ ml}$

Capacity of one glass = 25 ml

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

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

Therefore, 180 glasses can be filled by curd.

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Exercise 1.3

1. Estimate each of the following using general rule:

(a) $730 + 998$

Ans:

730 round off to 700

998 round off to 1000

Estimated sum = 1700

(b) $796 - 314$

Ans:

796 round off to 800

314 round off to 300

Estimated difference = 500

(c) $12,904 + 2,888$

Ans:

12904 round off to 13000

2888 round off to 3000

Estimated sum = 16000

(d) $28,292 - 21,496$

Ans:

28292 round off to 28000

21496 round 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) $439 + 334 + 4317$

Ans: Nearest hundreds

439 round off to 400

334 round off to 300

4317 round off to 4300

Estimated sum = 5000

Nearest tens

439 round off to 440

334 round off to 330

4317 round off to 4320

Estimated sum = 5090

(b) $1,08,737 - 47,599$

Ans: Nearest hundreds

108734 round off to 108700

47599 round off to 47600

Nearest tens

108734 round off to 108730

47599 round off to 47600

Estimated difference = 61130

Estimated difference = 61100

(c) $8325 - 491$

Ans: Nearest hundreds

8325 round off to 8300

491 round off to 500

Estimated difference = 7800

(d) $4,89,348 - 48,365$

Ans: Nearest hundreds

489348 round off to 489300

48365 round off to 48400

Estimated difference = 440900

Nearest tens

8325 round off to 8330

491 round off to 490

Estimated difference = 7840

Nearest tens

489348 round off to 489350

48365 round off to 48370

Estimated difference = 440980

3. Estimate the following products using general rule:

(a) 578×161

Ans:

578 round off to 600

161 round off to 200

Estimated product = 1,20,000

(b) 5281×3491

Ans:

5281 round off to 5000

3491 round off to 3500

Estimated product = 1,75,00,000

(c) 1291×592

Ans:

1291 round off to 1300

592 round off to 600

Estimated product = 7,80,000

(d) 9250×29

Ans:

9250 round off to 9,000

229 round off to 200

Estimated product = 18,00,000