

Board -NCERT

Class - 6th

Topic - Chapter 1 Knowing our numbers

Exercise - 1.1

Q1. Fill in the blanks:

- (a) 1 lakh = ten thousand.
- (b) 1 million = Hundred thousand.
- (c) 1 crore = ten lakhs.
- (d) 1 million =million.
- (e) 1 million = Lakh.

Sol. (a) 1 lakh = ten ten thousand.

- (b) 1 million = ten Hundred thousand.
- (c) 1 crore = ten ten lakhs.
- (d) 1 million = ten million.
- (e) 1 million = ten Lakh.

Q2. 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.

Sol. (a) 73,75,307

- (b) 9,05,00,041
- (c) 7,52,21,302
- (d) 5,84,23,202
- (e) 23,30,010

Q3. Insert commas suitably and write the names according to indian system of Numeration

- (a) 87595762
- (b) 8546283
- (c) 99900046
- (d) 98432701

Sol. (a) 8,75,95,762 (Eight crores 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)

Q4. Insert commas suitably and write the names according to international system of Numeration:

- (a) 78921092
- (b) 7452283
- (c) 99985102
- (d) 48049831

- Sol.
- (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

Q1. 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.

Sol. Number of tickets sold on the first day = 1094

Number of tickets sold on the second day = 1812

Number of tickets sold on the third day = 2050

Number of tickets sold on the final day = 2751

\therefore Total number of tickets sold on all the four days = $1094 + 1812 + 2050 + 2751 = 7,707$.

Q2. 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?

Sol. Shekhar has so far scored 6980 runs

He wishes to complete 10,000 runs.

Therefore total number of runs needed by him to complete 10,000 runs = $10,000 - 6980 = 3020$ runs

Q3. 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?

Sol. Number of votes secured by the successful candidate = 5,77,500

Number of votes secured by his nearest rival = 3,48,700

Therefore, margin of votes to win the election = $5,77,500 - 3,48,700 = 2,28,800$

Q4. 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?

Sol. Books sold in the first week of June = ₹2,85,891

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

Therefore, the total sale of books in the two weeks together

= $₹2,85,891 + ₹4,00,768 = ₹6,86,659$

In the second week of the month, the sale of books was greater.

Difference of the sale of books

= $₹4,00,768 - ₹2,85,891 = ₹1,14,877$

Hence, in the second week of June, the sale of books was more by ₹1,14,877.

Q5. Find the difference between the greatest and the least numbers that can be written using the digits 6, 2, 7, 4, 3 each only once.

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

Greatest number = 76432

Least number = 23467

Therefore, difference = $76432 - 23467 = 52,965$

Q6. A machine, on average, manufactures 2,825 screws a day. How many screws did it produce in the month of January 2006?

Sol. The number of screws manufactured in a day = 2,825.

Number of screws manufactured in month of January = $31 \times 2825 = 87,575$

Q7. 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?

Sol. Amount of money with the merchant = ₹78,592

Number of radio sets = 40

Price of one radio set = ₹1200

Therefore, cost of 40 radio sets = $₹1200 \times 40 = ₹48,000$

Remaining money with the merchant = ₹78,592 - ₹48000 = ₹30,592

Hence, an amount of ₹30,592 will remain with her after purchasing the radio sets.

Q8. A student multiplied 7236 by 65 instead of multiplying by 56. By how much was his answer greater than the correct answer?

Sol. The student has multiplied 7236 by 65 instead of multiplying by 56.

Difference between the two multiplications = $(65 - 56) \times 7236 = 9 \times 7236 = 65124$

(We don't need to do both the multiplication)

Hence, the answer is greater than the correct answer by 65,124.

Q9. 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?

$$\begin{array}{r} 215 \overline{)40000} 18 \\ \underline{215} \\ 1850 \\ \underline{1720} \\ 130 \end{array}$$

Sol. Total length of the cloth = 40 m = 40×100 cm = 4000 cm.

Cloth needed to stitch a shirt = 2 m 15 cm = $2 \times 100 + 15$ cm = 215 cm

Therefore, number of shirts stitched = $\frac{4000}{215}$

So, the number of shirts stitched = 18 and the remaining cloth = 130 cm = 1 m 30 cm.

Q10. 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?

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

Sol. Weight of one box = 4 kg 500 g = $4 \times 1000 + 500 = 4500$ g

and 800 kg = $800 \times 1000 = 800000$ g

Therefore, 177 boxes can only be loaded in the van.

Q11. The distance between the school and the house of a student is 1 km 875 m. Every day she walks both ways. Find the total distance covered by her in six days.

Sol. Distance between school and house = 1 km 875 m = $(1000 + 875)$ m = 1875 m.

Distance travelled by the student in both ways = $2 \times 1875 = 3750$ m

Distance travelled in 6 days = $3750 \text{ m} \times 6 = 22500 \text{ m} = 22 \text{ km } 500 \text{ m}$.

Hence, total distance covered in six days = 22 km 500 m.

Q12. A vessel has 4 litres and 500 ml of curd. In how many glasses, each of 25 mL capacity, can it be filled? –

Sol. Quantity of curd in a vessel = 4 l 500 mL = $(4 \times 1000 + 500) \text{ mL} = 4500 \text{ mL}$.

Capacity of 1 glass = 25 mL

Therefore, number of glasses = $\frac{4500}{25} = 180$

Exercise – 1.3

Q1. 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.

Sol. (a) $730 + 998$

Rounding off 730 nearest to hundreds = 700

Rounding off 998 nearest to hundreds = 1,000

$\therefore 730 + 998 = 700 + 1000 = 1700$

(b) $796 - 314$

Rounding off 796 nearest to hundreds = 800

Rounding off 314 nearest to hundreds = 300

$\therefore 796 - 314 = 800 - 300 = 500$

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

Rounding off 12,904 nearest to thousands = 13000

Rounding off 2888 nearest to thousands = 3000

$\therefore 12,904 + 2,888 = 13000 + 3000 = 16000$

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

Rounding off 28,292 nearest to thousands = 28,000

Rounding off 21,496 nearest to thousands = 21,000

$\therefore 28,292 - 21,496 = 28,000 - 21,000 = 7,000$

Example 1: $1210 + 2365 = 1200 + 2400 = 3600$

Example 2: $3853 + 6524 = 4000 + 7000 = 11,000$

Example 3: $8752 - 3654 = 9,000 - 4,000 = 5,000$

Example 4: $4538 - 2965 = 5,000 - 3,000 = 2,000$

Example 5: $1927 + 3185 = 2000 + 3,000 = 5,000$

Example 6: $3258 - 1698 = 3000 - 2000 = 1,000$

Example 7: $8735 + 6232 = 9000 + 6000 = 15,000$

Example 8: $1038 - 1028 = 1000 - 1000 = 0$

Example 9: $6352 + 5830 = 6,000 + 6,000 = 12,000$

Example 10: $9854 - 6385 = 10,000 - 6000 = 4,000$

Q2. 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) $8,325 - 491$

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

Make four such examples:

Sol. (a) $439 + 334 + 4,317$

(i) Rough estimate (Rounding off to nearest hundreds)

$$439 + 334 + 4,317 = 400 + 300 + 4300 = 5,000$$

(ii) Closer estimate (Rounding off to nearest tens)

$$439 + 334 + 4317 = 440 + 330 + 4320 = 5090.$$

NCERT Solutions For Class 6 Maths Knowing Our Numbers Exercise 1.3

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(b) $1,08,734 - 47,599$

(i) Rough estimate (Rounding off to nearest hundreds)

$$1,08,734 - 47,599 = 1,08,700 - 47,600 = 61,100$$

(ii) Closer estimate (Rounding off to nearest tens)

$$1,08,734 - 47,599 = 1,08,730 - 47,600 = 61,130.$$

(c) $8325 - 491$

(i) Rough estimate (Rounding off to nearest hundreds)

$$8325 - 491 = 8300 - 500 = 7800$$

(ii) Closer estimate (Rounding off to nearest tens)

$$8325 - 491 = 8330 - 490 = 7840.$$

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

(i) Rough estimate (Rounding off to nearest hundreds)

$$4,89,348 - 48,365 = 4,89,300 - 48,400 = 4,40,900$$

(ii) Closer estimate (Rounding off to nearest tens)

$$4,89,348 - 48,365 = 4,89,350 - 48,370 = 4,40,980$$

Example 1:

$$384 + 562$$

Solution:

(i) Rough estimate (Rounding off to nearest hundreds)

$$384 + 562 = 400 + 600 = 1,000$$

(ii) Closer estimate (Rounding off to nearest tens)

$$384 + 562 = 380 + 560 = 940$$

Example 2:

$$8765 - 3820$$

Solution:

(i) Rough estimate (Rounding off to nearest hundreds)

$$8765 - 3820 = 8800 - 3900 = 4900$$

(ii) Closer estimate (Rounding off to nearest tens)

$$8765 - 3820 = 8770 - 3820 = 4950$$

Example 3:

$$6653 - 8265$$

Solution:

(i) Rough estimate (Rounding off to nearest hundreds)

$$6653 + 8265 = 6700 + 8300 = 15,000$$

(ii) Closer estimate (Rounding off to nearest tens)

$$6653 + 8265 = 6650 + 8270 = 14920$$

Example 4:

$$3826 - 1262$$

Solution:

(i) Rough estimate (Rounding off to nearest hundreds)

$$3826 - 1262 = 3800 - 1300 = 2500$$

(ii) Closer estimate (Rounding off to nearest tens)

$$3826 - 1262 = 3830 - 1260 = 2570$$

Q3. Estimate the following products using general rule:

(a) 578×161

(b) 5281×3491

(c) 1291×592

(d) 9250×29

Make four more such examples.

Sol. (a) $578 \times 161 = 600 \times 200 = 1,20,000$

(b) $5281 \times 3491 = 5000 \times 3000 = 1,50,00,000$

$$(c) 1291 \times 592 = 1300 \times 600 = 7,80,000$$

$$(d) 9250 \times 29 = 9000 \times 30 = 2,70,000$$

Example 1.

$$382 \times 1062$$

Solution:

$$382 \times 1062 = 400 \times 1000 = 4,00,000$$

Example 2.

$$6821 \times 1291$$

Solution:

$$6821 \times 1291 = 7000 \times 1000 = 70,00,000$$

Example 3.

$$3858 \times 9350$$

Solution:

$$3858 \times 9350 = 4000 \times 9000 = 3,60,00,000$$

Example 4.

$$3405 \times 7502$$

Solution:

$$3405 \times 7502 = 3000 \times 8000 = 2,40,00,000$$