

# NCERT Solutions for Class 6th Maths

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National Council of Educational Research and Training (NCERT) Book Solutions for Class 6th

Subject: Maths

Chapter: Chapter 1 – Knowing Our Numbers

Class 6th Maths Chapter 1 Knowing Our Numbers NCERT Solution is given below.

### Exercise 1.1

#### Question 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.

Answer:

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and 1 hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and 1 million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and 1 lakh} = 1,00,000)$$

#### Question 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.

Answer:

$$(a) \underline{73,75,307}$$

$$(b) \underline{9,05,00,041}$$

$$(c) \underline{7,52,21,302}$$

$$(d) \underline{58,423,202}$$

$$(e) \underline{23,30,010}$$

#### Question 3:

Insert commas suitably and write the names according to Indian System of Numeration:

$$(a). \underline{87595762} \quad (b). \underline{8546283}$$

(c). 99900046 (d). 98432701

Answer:

(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

**Question 4:**

Insert commas suitably and write the names according to International System of Numeration:

(a). 78921092 (b). 7452283

(c). 99985102 (c). 48049831

Answer:

(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**

**Question 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.

Answer:

Tickets sold on 1st day = 1094

Tickets sold on 2nd day = 1812

Tickets sold on 3rd day = 2050

Tickets sold on 4th day = 2751

Total tickets sold = 1094 + 1812 + 2050 + 2751

(a) lakh =  $\frac{10}{100000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1000000}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{10000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{100000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{10000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

∴ Total tickets sold = 7,707

**Question 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?

Answer:

Runs scored so far = 6980

Runs Shekhar wants to score = 10,000

More runs required =  $10,000 - 6980$

(a) lakh =  $\frac{10}{100000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1000000}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{10000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{10000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

∴ Shekhar requires 3,020 more runs.

**Question 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?

Answer:

Votes secured by successful candidate = 5,77,500

Votes secured by rival = 3,48,700

Margin =  $5,77,500 - 3,48,700$

(a) lakh =  $\frac{10}{100000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1000000}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{10000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{10000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

∴ Margin = 2,28,800

**Question 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?

Answer:

Value of Books sold in 1st week = Rs 2,85,891

Value of books sold in 2nd week = Rs 4,00,768

Total sale = Sale in 1st week + Sale in 2nd week = 2,85,891 + 4,00,768

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,00,00,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,00,00,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,00,00,000 and 1 lakh = 1,00,000)

The sale for the two weeks together was 6,86,659.

Since 4,00,768 > 2,85,891, sale in 2nd week was greater than 1st week.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,00,00,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,00,00,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,00,00,000 and 1 lakh = 1,00,000)

∴ The sale in 2nd week was larger than the sale in 1st week by Rs 1,14,877.

**Question 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.

Answer:

Greatest number = 76432

Smallest number = 23467

$$\text{Difference} = 76432 - 23467 \quad 76432 - 23467$$

$$(a) \text{ lakh} = \frac{10}{100000} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{1000000} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{10000000} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{100000000} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and } 1 \text{ million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{10000000} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ lakh} = 1,00,000)$$

Therefore, the difference between the greatest and the least number that can be written using the digits 6, 2, 7, 4, 3 each only once is 52,965.

#### **Question 6:**

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

Answer:

$$\text{Screws produced in one day} = 2,825$$

$$\text{Days in January} = 31$$

$$\text{Screws produced in 31 days} = 2825 \times 31$$

$$(a) \text{ lakh} = \frac{10}{100000} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{10000000} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{100000000} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{1000000000} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and } 1 \text{ million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{100000000} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ lakh} = 1,00,000)$$

Therefore, screws produced during Jan, 06 = 87,575

#### **Question 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?

Answer:

$$\text{Cost of one radio set} = \text{Rs } 1200$$

$$\text{Cost of 40 radio sets} = 1200 \times 40 = \text{Rs } 48000$$

Money with Merchant = Rs 78,592

Money spent = Rs 48,000

Money left =  $78592 - 48000$

(a) lakh =  $\frac{10}{100000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1000000}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{10000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{100000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{10000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

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

**Question 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?)

Answer:

Difference between 65 and 56 = 9

Difference in the answer =  $7236 \times 9$

(a) lakh =  $\frac{10}{100000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1000000}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{10000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{100000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{10000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

Therefore, his answer was greater than the correct answer by 65,124.

**Question 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?)

Answer:

Difference between 65 and 56 = 9

Difference in the answer =  $7236 \times 9$

$$(a) \text{ lakh} = \frac{10}{10} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{100} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{100} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{1000} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and } 1 \text{ million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{1000} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ lakh} = 1,00,000)$$

Therefore, his answer was greater than the correct answer by 65,124.

**Question 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?)

Answer:

$$\text{Difference between } 65 \text{ and } 56 = 9$$

$$\text{Difference in the answer} = 7236 \times 9$$

$$(a) \text{ lakh} = \frac{10}{10} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{100} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{100} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{1000} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and } 1 \text{ million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{1000} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ lakh} = 1,00,000)$$

Therefore, his answer was greater than the correct answer by 65,124.

**Question 9:**

To stitch a shirt, 2m 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.)

Answer:

$$2 \text{ m } 15 \text{ cm} = 215 \text{ cm} \quad (1 \text{ m} = 100 \text{ cm}) \quad 40 \text{ m} = 40 \times 100 = 4000 \text{ cm}$$

$$\text{Cloth required for one shirt} = 215 \text{ cm}$$

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

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and } 1 \text{ million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ lakh} = 1,00,000)$$

Therefore, 18 shirts can be made. 130 cm, i.e. 1 m 30 cm, cloth will remain.

**Question 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?

Answer:

$$1 \text{ kg} = 1000 \text{ g}$$

$$4 \text{ kg } 500 \text{ g} = 4500 \text{ g}$$

$$800 \text{ kg} = 800 \times 1000 = 800000 \text{ g}$$

$$\text{Number of boxes that can be loaded in the van} = 800000 \div 4500$$

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

$$(1 \text{ lakh} = 1,00,000 \text{ and ten thousand} = 10,000)$$

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ hundred thousand} = 1,00,000)$$

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and Ten lakh} = 10,00,000)$$

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

$$(1 \text{ crore} = 1,00,00,000 \text{ and } 1 \text{ million} = 1,000,000)$$

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

$$(1 \text{ million} = 1,000,000 \text{ and } 1 \text{ lakh} = 1,00,000)$$

Hence, 177 boxes at maximum can be loaded in the van.

**Question 11:**

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

Answer:

$$\text{Distance between school and house} = 1 \text{ km } 875 \text{ m}$$

$$\text{Now, } 1 \text{ km} = 1000 \text{ m}$$

$$1 \text{ km } 875 \text{ m} = 1875 \text{ m}$$



Distance covered each day =  $1875 \times 2 = 3750$  m

Distance covered in 6 days =  $3750 \times 6$

(a) lakh =  $\frac{10}{10000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{100}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{10000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{10000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

Therefore, distance covered in 6 days = 22,500 m = 22.5 km or 22 km 500 m

**Question 12:**

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

Answer:

Capacity of vessel = 4 l 500 ml = 4500 ml (1 l = 1000 ml)

Capacity of a glass = 25 ml

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

(a) lakh =  $\frac{10}{10000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{100}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{10000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{10000000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

$\therefore$  180 glasses can be filled.

**Exercise 1.3**

**Question 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.

Answer:

(a) 730 + 998

By rounding off to hundreds, 730 rounds off to 700 and 998 rounds off to 1000.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

(b) 796 - 314

By rounding off to hundreds, 796 rounds off to 800 and 314 rounds off to 300.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

(c) 12904 + 2822

By rounding off to thousands, 12904 rounds off to 13000 and 2822 rounds off to 3000.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

(d) 28,296 - 21,496

By rounding off to nearest thousands, 28296 rounds off to 28000 and 21496 rounds off to 21000.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

### Question 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.

Answer:

(a) 439 + 334 + 4317

Rounding off to nearest hundreds, 439, 334, and 4317 may be rounded off to 400, 300, and 4300 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

Rounding off to nearest tens, 439, 334, and 4317 may be rounded off to 440, 330, and 4320 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

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

Rounding off to hundreds, 1,08,734 and 47,599 may be rounded off to 1,08,700 and 47,600 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

Rounding off to tens, 1,08,734 and 47,599 may be rounded off to 1,08,730 and 47,600 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

(c) 8325 - 491

Rounding off to hundreds, 8325 and 491 may be rounded off to 8300 and 500 respectively.

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

(1 lakh = 1,00,000 and ten thousand = 10,000)

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

(1 million = 1,00,000 and 1 hundred thousand = 1,00,000)

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

(1 million = 1,000,000 and 1 lakh = 1,00,000)

Rounding off to tens, 8325 and 491 may be rounded off to 8330 and 490 respectively.

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

(1 lakh = 1,00,000 and ten thousand = 10,000)

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

(1 million = 1,000,000 and 1 lakh = 1,00,000)

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

Rounding off to hundreds, 489348 and 48365 may be rounded off to 489300 and 48400 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

Rounding off to tens, 489348 and 48365 may be rounded off to 489350 and 48370 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

**Question 3:**

Estimate the following products using general rule:

(a)  $578 \times 161$  (b)  $5281 \times 3491$

(c)  $1291 \times 592$  (d)  $9250 \times 29$

Answer:

(a)  $578 \times 161$

Rounding off by general rule, 598 and 161 may be rounded off to 600 and 200 respectively.

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

(1 lakh = 1,00,000 and ten thousand = 10,000)

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

(1 million = 1,00,00,000 and 1 hundred thousand = 1,00,000)

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

(1 million = 1,000,000 and 1 lakh = 1,00,000)

(b)  $5281 \times 3491$

Rounding off by general rule, 5281 and 3491 may be rounded off to 5000 and 3000 respectively.

$$(a) \text{ lakh} = \frac{10}{1} \text{ ten thousand}$$

(1 lakh = 1,00,000 and ten thousand = 10,000)

$$(b) 1 \text{ million} = \frac{10}{1} \text{ hundred thousand}$$

(1 million = 1,00,00,000 and 1 hundred thousand = 1,00,000)

$$(c) 1 \text{ crore} = \frac{10}{1} \text{ ten lakh}$$

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

$$(d) 1 \text{ crore} = \frac{10}{1} \text{ million}$$

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

$$(e) 1 \text{ million} = \frac{10}{1} \text{ lakh}$$

(1 million = 1,000,000 and 1 lakh = 1,00,000)



(c)  $1291 \times 592$

Rounding off by general rule, 1291 and 592 may be rounded off to 1000 and 600 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

(d)  $9250 \times 29$

Rounding off by general rule, 9250 and 29 may be rounded off to 9000 and 30 respectively.

(a) lakh =  $\frac{10}{1}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{1}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{1}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{1}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

# NCERT Solutions for Class 6th Maths

## <http://freehomedelivery.net/>: Chapter 2 – Whole Numbers

National Council of Educational Research and Training (NCERT) Book Solutions for Class 6th

Subject: Maths

Chapter: Chapter 2 – Whole Numbers

Class 6th Maths Chapter 2 Whole Numbers NCERT Solution is given below.

### Exercise – 2.1

#### **Question 1:**

Write the next three natural numbers after 10999.

Answer:

Next three natural numbers after 10999 are 11000, 11001, 11002

#### **Question 2:**

Write the three whole numbers occurring just before 10001.

Answer:

3 whole numbers just before 10001 are 10000, 9999, 9998

#### **Question 3:**

Which is the smallest whole number?

Answer:

The smallest whole number is 0.

#### **Question 4:**

How many whole numbers are there between 32 and 53?

Answer:

Whole numbers between 32 and 53 = 20 ( $53 - 32 - 1 = 20$ )

(33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52)

#### **Question 5:**

Write the successor of:

- (a) 2440701 (b) 100199  
(c) 1099999 (d) 2345670

Answer:

- (a)  $2440701 + 1 = 2440702$   
(b)  $100199 + 1 = 100200$   
(c)  $1099999 + 1 = 1100000$   
(d)  $2345670 + 1 = 2345671$

#### **Question 6:**

Write the predecessor of:

- (a) 94 (b) 10000  
(c) 208090 (d) 7654321

Answer:

- (a)  $94 - 1 = 93$   
(b)  $10000 - 1 = 9999$   
(c)  $208090 - 1 = 208089$   
(d)  $7654321 - 1 = 7654320$

#### **Question 7:**

In each of the following pairs of numbers, state which whole number is on the left of the other number on the number line. Also write them with the appropriate sign ( $>$ ,  $<$ ) between them.

- (a) 530, 503 (b) 370, 307  
(c) 98765, 56789 (d) 9830415, 10023001

Answer:

- (a) 530, 503

As  $530 > 503$ ,

503 is on the left side of 530 on the number line.

- (b) 370, 307

As  $370 > 307$ ,

307 is on the left side of 370 on the number line.

(c) 98765, 56789

As  $98765 > 56789$ ,

56789 is on the left side of 98765 on the number line.

(d) 9830415, 10023001

Since  $98, 30, 415 < 1, 00, 23, 001$ , 98,30,415 is on the left side of 1,00,23,001 on the number line.

**Question 8:**

Which of the following statements are true (T) and which are false (F)?

(a) Zero is the smallest natural number.

(b) 400 is the predecessor of 399.

(c) Zero is the smallest whole number.

(d) 600 is the successor of 599.

(e) All natural numbers are whole numbers.

(f) All whole numbers are natural numbers.

(g) The predecessor of a two digit number is never a single digit number.

(h) 1 is the smallest whole number.

(i) The natural number 1 has no predecessor.

(j) The whole number 1 has no predecessor.

(k) The whole number 13 lies between 11 and 12.

(l) The whole number 0 has no predecessor.

(m) The successor of a two digit number is always a two digit number.

Answer:

(a) False, 0 is not a natural number.

(b) False, as predecessor of 399 is 398 ( $399 - 1 = 398$ ).

(c) True

(d) True, as  $599 + 1 = 600$

(e) True

(f) False, as 0 is a whole number but it is not a natural number.

(g) False, as predecessor of 10 is 9.

(h) False, 0 is the smallest whole number.

(i) True, as 0 is the predecessor of 1 but it is not a natural number.

(j) False, as 0 is the predecessor of 1 and it is a whole number.

(k) False, 13 does not lie in between 11 and 12.

(l) True, predecessor of 0 is  $-1$ , which is not a whole number.

(m) False, as successor of 99 is 100.

**Exercise 2.2**

**Question 1:**

Find the sum by suitable rearrangement:

(a)  $837 + 208 + 363$  (b)  $1962 + 453 + 1538 + 647$

Answer:

(a)  $837 + 208 + 363 = (837 + 363) + 208 = 1200 + 208 = 1408$

(b)  $1962 + 453 + 1538 + 647 = (1962 + 1538) + (453 + 647) = 3500 + 1100 = 4600$

**Question 2:**

Find the product by suitable rearrangement:

(a)  $2 \times 1768 \times 50$  (b)  $4 \times 166 \times 25$

(c)  $8 \times 291 \times 125$  (d)  $625 \times 279 \times 16$

(e)  $285 \times 5 \times 60$  (f)  $125 \times 40 \times 8 \times 25$

Answer:

(a)  $2 \times 1768 \times 50 = 2 \times 50 \times 1768 = 100 \times 1768 = 176800$

(b)  $4 \times 166 \times 25 = 4 \times 25 \times 166 = 100 \times 166 = 16600$

(c)  $8 \times 291 \times 125 = 8 \times 125 \times 291 = 1000 \times 291 = 291000$

(d)  $625 \times 279 \times 16 = 625 \times 16 \times 279 = 10000 \times 279 = 2790000$

(e)  $285 \times 5 \times 60 = 285 \times 300 = 85500$

$$(f) 125 \times 40 \times 8 \times 25 = 125 \times 8 \times 40 \times 25 = 1000 \times 1000 = 1000000$$

**Question 3:**

Find the value of the following:

$$(a) 297 \times 17 + 297 \times 3 \quad (b) 54279 \times 92 + 8 \times 54279$$

$$(c) 81265 \times 169 - 81265 \times 69 \quad (d) 3845 \times 5 \times 782 + 769 \times 25 \times 218$$

Answer:

$$(a) 297 \times 17 + 297 \times 3 = 297 \times (17 + 3) = 297 \times 20 = 5940$$

$$(b) 54279 \times 92 + 8 \times 54279 = 54279 \times 92 + 54279 \times 8$$

$$= 54279 \times (92 + 8)$$

$$= 54279 \times 100 = 5427900$$

$$(c) 81265 \times 169 - 81265 \times 69 = 81265 \times (169 - 69) = 81265 \times 100 = 8126500$$

$$(d) 3845 \times 5 \times 782 + 769 \times 25 \times 218$$

$$= 3845 \times 5 \times 782 + 769 \times 5 \times 5 \times 218$$

$$= 3845 \times 5 \times 782 + 3845 \times 5 \times 218$$

$$= 3845 \times 5 \times (782 + 218)$$

$$= 19225 \times 1000 = 19225000$$

**Question 4:**

Find the product using suitable properties.

$$(a) 738 \times 103 \quad (b) 854 \times 102$$

$$(c) 258 \times 1008 \quad (d) 1005 \times 168$$

Answer:

$$(a) 738 \times 103 = 738 \times (100 + 3)$$

$$= 738 \times 100 + 738 \times 3 \text{ (Distributive property)}$$

$$= 73800 + 2214$$

$$= 76014$$

$$(b) 854 \times 102 = 854 \times (100 + 2)$$

$$= 854 \times 100 + 854 \times 2 \text{ (Distributive property)}$$

$$= 85400 + 1708 = 87108$$

$$(c) 258 \times 1008 = 258 \times (1000 + 8)$$

$$= 258 \times 1000 + 258 \times 8 \text{ (Distributive property)}$$

$$= 258000 + 2064 = 260064$$

$$(d) 1005 \times 168 = (1000 + 5) \times 168$$

$$= 1000 \times 168 + 5 \times 168 \text{ (Distributive property)}$$

$$= 168000 + 840 = 168840$$

**Question 5:**

A taxi driver filled his car petrol tank with 40 litres of petrol on Monday. The next day, he filled the tank with 50 litres of petrol. If the petrol costs Rs 44 per litre, how much did he spend in all on petrol?

Answer:

$$\text{Quantity of petrol filled on Monday} = 40 \text{ l}$$

$$\text{Quantity of petrol filled on Tuesday} = 50 \text{ l}$$

$$\text{Total quantity filled} = (40 + 50) \text{ l}$$

$$\text{Cost of petrol (per l)} = \text{Rs } 44$$

$$\text{Total money spent} = 44 \times (40 + 50) = 44 \times 90 = \text{Rs } 3960$$

**Question 6:**

A vendor supplies 32 litres of milk to a hotel in the morning and 68 litres of milk in the evening. If the milk costs Rs 15 per litre, how much money is due to the vendor per day?

Answer:

$$\text{Quantity of milk supplied in the morning} = 32 \text{ l}$$

$$\text{Quantity of milk supplied in the evening} = 68 \text{ l}$$

$$\text{Total of milk per litre} = (32 + 68) \text{ l}$$

$$\text{Cost of milk per litre} = \text{Rs } 15$$

$$\text{Total cost per day} = 15 \times (32 + 68)$$

$$= 15 \times 100 = \text{Rs } 1500$$

**Question 7:**

Match the following:

(i)  $425 \times 136 = 425 \times (6 + 30 + 100)$

(a) Commutativity under multiplication

(ii)  $2 \times 49 \times 50 = 2 \times 50 \times 49$

(b) Commutativity under addition

(iii)  $80 + 2005 + 20 = 80 + 20 + 2005$

(c) Distributivity of multiplication over addition

Answer:

(i)  $425 \times 136 = 425 \times (6 + 30 + 100)$  [Distributivity of multiplication over addition] Hence, (c)

(ii)  $2 \times 49 \times 50 = 2 \times 50 \times 49$  [Commutativity under multiplication] Hence, (a)

(iii)  $80 + 2005 + 20 = 80 + 20 + 2005$  [Commutativity under addition] Hence, (b)

### Exercise 2.3

#### Question 1:

Which of the following will not represent zero?

(a)  $1 + 0$  (b)  $0 \times 0$

(a) lakh =  $\frac{10}{100000}$  ten thousand

(1 lakh = 1,00,000 and ten thousand = 10,000)

(b) 1 million =  $\frac{10}{100000}$  hundred thousand

(1 million = 1,000,000 and 1 hundred thousand = 1,00,000)

(c) 1 crore =  $\frac{10}{1000000}$  ten lakh

(1 crore = 1,00,00,000 and Ten lakh = 10,00,000)

(d) 1 crore =  $\frac{10}{10000000}$  million

(1 crore = 1,00,00,000 and 1 million = 1,000,000)

(e) 1 million =  $\frac{10}{100000}$  lakh

(1 million = 1,000,000 and 1 lakh = 1,00,000)

#### Question 2:

If the product of two whole numbers is zero, can we say that one or both of them will be zero? Justify through examples.

Answer:

If the product of 2 whole numbers is zero, then one of them is definitely zero.

For example,  $0 \times 2 = 0$  and  $17 \times 0 = 0$

If the product of 2 whole numbers is zero, then both of them may be zero.

$0 \times 0 = 0$

However,  $2 \times 3 = 6$

(Since numbers to be multiplied are not equal to zero, the result of the product will also be non-zero.)

#### Question 3:

If the product of two whole numbers is 1, can we say that one of both of them will be 1? Justify through examples.

Answer:

If the product of 2 numbers is 1, then both the numbers have to be equal to 1.

For example,  $1 \times 1 = 1$

However,  $1 \times 6 = 6$

Clearly, the product of two whole numbers will be 1 in the situation when both numbers to be multiplied are 1.

#### Question 4:

Find using distributive property:

(a)  $728 \times 101$  (b)  $5437 \times 1001$

(c)  $824 \times 25$  (d)  $4275 \times 125$

(e)  $504 \times 35$

Answer:

(a)  $728 \times 101 = 728 \times (100 + 1)$

$= 728 \times 100 + 728 \times 1$

$= 72800 + 728 = 73528$

(b)  $5437 \times 1001 = 5437 \times (1000 + 1)$

$= 5437 \times 1000 + 5437 \times 1$

$= 5437000 + 5437 = 5442437$

(c)  $824 \times 25 = (800 + 24) \times 25$

$= (800 + 25 - 1) \times 25$

$= 800 \times 25 + 25 \times 25 - 1 \times 25$

$= 20000 + 625 - 25$

$= 20000 + 600 = 20600$

(d)  $4275 \times 125 = (4000 + 200 + 100 - 25) \times 125$

$= 4000 \times 125 + 200 \times 125 + 100 \times 125 - 25 \times 125$

$= 500000 + 25000 + 12500 - 3125$

$= 534375$

(e)  $504 \times 35 = (500 + 4) \times 35$

$= 500 \times 35 + 4 \times 35$

$= 17500 + 140 = 17640$

### Question 5:

Study the pattern:

$1 \times 8 + 1 = 9$   $1234 \times 8 + 4 = 9876$

$12 \times 8 + 2 = 98$   $12345 \times 8 + 5 = 98765$

$123 \times 8 + 3 = 987$

Write the next two steps. Can you say how the pattern works?

(Hint:  $12345 = 11111 + 1111 + 111 + 11 + 1$ ).

Answer:

$123456 \times 8 + 6 = 987648 + 6 = 987654$

$1234567 \times 8 + 7 = 9876536 + 7 = 9876543$

Yes, the pattern works.

As  $123456 = 111111 + 11111 + 1111 + 111 + 11 + 1$ ,

$123456 \times 8 = (111111 + 11111 + 1111 + 111 + 11 + 1) \times 8$

$= 111111 \times 8 + 11111 \times 8 + 1111 \times 8 + 111 \times 8 + 11 \times 8 + 1 \times 8$

$= 888888 + 88888 + 8888 + 888 + 88 + 8 = 987648$

$123456 \times 8 + 6 = 987648 + 6 = 987654$