

Chapter - 1

Number System

Worksheet

1. The difference between the largest 5-digit number and largest 5-digit number with three distinct digits is.

- (a) 10 (b) 10012 (c) 12 (d) 123

2. The largest four digit number, using any one digit twice from digits 5, 9, 2 and 6 is.

- (a) 9652 (b) 9562 (c) 9659 (d) 9965

3. The largest 5-digit number having three different digits is.

- (a) 98978 (b) 99897 (c) 99987 (d) 98799

4. Compare the numbers 9524420 and 9528420.

Both numbers have 7-digits and they show difference in thousands.

9528420 is greater
9524420 is smaller

5. What is the smallest three digit number with unique digits?

102

6. What is the smallest 3-digit number which does not change if digits are written in reverse?

101

7. Arrange the numbers 5949107, 3578160, 3808761, 1596496, 9524420, 5446837, 6174985 in ascending order.

• -> 1596496, 3578160, 3808761, 5446837, 5949107, 6174985, 9524420

8. Arrange the numbers 5977333, 2049014, 9798934, 3440557, 544696, 5655237, 3446116 in descending order.

• -> 9798934, 5977333, 5655237, 3446116, 3440557, 2049014, 544696

9. Consider the following:

i) Write the smallest 5 digit number having two different digits. 10101

ii) Write the smallest 6 digit number having three different digits. 100002

iii) Write the largest 7 digit number having three different digits. 1000002

10. State true or false.

i) The largest six digit telephone number that can be formed by using digits 5, 3, 4, 7, 0, 8 only once is 875403. False

ii) The largest 4-digit number formed by the digits 6, 7, 0, 9 using each digit only once is 9760. True

iii) The smallest 4-digit number is the successor of the largest 3-digit number. True

11. Find the smallest and largest no.

i) 382, 4972, 18, 59785, 750.

Smallest no. - 18
Largest no. - 59785

ii) 1473, 89423, 100, 5000, 310.

Smallest no. - 100
Largest no. - 89423

iii) 1834, 75284, 111, 2333, 450.

Smallest no. - 111
Largest no. - 75284

iv) 2853, 7691, 9999, 12002, 124

Smallest no. - 124

Largest no. - 12002

12. Arrange the following numbers in ascending order.

i) 4017, 25134, 6732, 19547, 15012

4017, 6732, 15012, 19547, 25134

ii) 5674, 2019, 56107, 76906, 2199

2019, 2199, 5674, 56107, 76906

13. Arrange the following numbers in descending order.

i) 65137, 3019, 43850, 26197, 25091

65137, 43850, 26197, 25091, 3019

ii) 7326, 2417, 4972, 62253, 73317

73317, 62253, 7326, 4972, 2417

14. A machine on an average manufactures 2825 screws a day. How much screws did it produce in the month of January 2006?

Number of screens manufactured in one day = 2,825
Screens produced in the month of January 2006 = $2,825 \times 31$

\therefore So, 87,575 screens produced in the month of January 2006

$$\begin{array}{r} 2,825 \\ \times 31 \\ \hline + 28250 \\ 87575 \end{array}$$

15. The difference between two numbers is 983563. If the greater number is 1398357, find the smaller number.

$$1398357 - 983563 = 414794$$

\therefore Therefore, the smaller number is 414794

16. The total mass of 8 packets each of same size is 42 kg 400 gm. What is the mass of each such packet?

$$\begin{aligned} \text{Mass of 8 packets} &= 42 \text{ kg } 400 \text{ gm} \\ &= 42 \times 1000 + 400 \text{ gm} \\ &= 42000 + 400 \text{ gm} \\ &= 42400 \text{ gm} \end{aligned}$$

$$\text{mass of one packet} = 42400 \div 8 \text{ gm}$$

$$\begin{array}{r} 5300 \\ 8 \overline{) 42400} \\ \underline{- 40} \\ 24 \\ \underline{- 24} \\ 000 \end{array}$$

\therefore Therefore, mass of each packet = 5,300 gm

17. Mr. Singh saves Rs 250 per month. How much money will he save in 3 years?

Saving in 1 month = Rs 250

Saving in 3 months = Rs $250 \times 3 = 750$

$$\begin{array}{r} 250 \\ \times 3 \\ \hline 750 \end{array}$$

\therefore Therefore, he will save Rs 750 in 3 months.

18. A merchant had Rs 78592 with her. She placed an order for purchasing 40 radio sets at Rs 1200 each. How much money will remain with her after purchase?

Cost of 1 radio set = Rs 1200

Cost of 40 radio set = Rs $1200 \times 40 = 48000$

$$\begin{array}{r} 1200 \\ \times 40 \\ \hline 48000 \end{array}$$

Total amount with merchant = Rs. 78,592

Amount spent = 48,000

Remaining amount after purchase = $78,592 - 48,000 = 30,592$

\therefore Therefore, 30,592 amount remains with her

19. Medicine is packed boxes each weighing 4 kg 500 gm. How many such boxes can be loaded in a van which cannot carry beyond 800 kg?

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

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

Number of boxes = $800000 \div 4500 = 177$

\therefore Therefore, 177 boxes can be loaded in van that can't carry beyond 800 kg.

20. Shankar is a famous cricket player. He has so far scored 6980, runs in test matches. He wishes to complete 10000 runs. How many more runs does he need?

Number of runs Shankar wants to complete = 10,000

Number of runs Shankar has completed = 6980

Number of runs Shankar has to complete = 10,000 - 6980

∴ Thus, after scoring 6980 runs in test match
Shankar will need 3020 runs to complete 10,000.

$$\begin{array}{r} 10,000 \\ - 6,980 \\ \hline 3,020 \end{array}$$

21. A vessel has 4 litres and 500 ml of curd. In how many glasses, each of 25 ml capacity can it be filled? Also find in how many glasses, each of 50 ml capacity can it be filled?

Capacity of curd in a vessel = 4 litres 500 ml = 4 × 1000 ml + 500 ml = 4500 ml

Capacity of one glass = 25 ml

Number of glasses can be filled = 4500/25 = 180

$$\begin{array}{r} 25 \overline{) 4500} \\ - 25 \downarrow \\ \hline 200 \\ - 200 \downarrow \\ \hline 00 \end{array}$$

∴ Therefore, 180 glasses can be filled by curd.

Capacity of one glass = 50 ml

Number of glasses can be filled = 4500/50 = 90

$$\begin{array}{r} 90 \\ 50 \overline{) 4500} \\ - 450 \downarrow \\ \hline 00 \end{array}$$

∴ Therefore, 90 glasses can be filled by curd.

22. A mobile number consists of ten digits. The first four digits of the number are 9, 9, 8 and 7. The last three digits are 3, 5 and 5. The remaining digits are distinct and make the mobile number, the greatest possible number. What are these digits?

First four digits = 9987
last three digits = 355
remaining digits are = 6, 4, 2 and 0
For greatest possible number, we have to do descending order
from greatest digit = 642

∴ Therefore, possible largest number is 9987642355

23. 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.

Tickets sold on first day = 1,094
Tickets sold on second day = 1,812
Tickets sold on third day = 2,050
Tickets sold on final day = 2,751

$$\text{Total ticket sold} = 1,094 + 1,812 + 2,050 + 2,751 = 7,707$$

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

$$\begin{array}{r} 1,094 \\ 1,812 \\ 2,050 \\ + 2,751 \\ \hline 7,707 \end{array}$$

24. 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?

Cost of 1 radio set = Rs 1200

Cost of 40 radio set = Rs 1200 x 40 = 1200

$$\begin{array}{r}
 \times 40 \\
 \hline
 48000
 \end{array}$$

Total amount with merchant = Rs. 78,592

Amount spent = 48,000

$$\begin{array}{r}
 \text{Remaining amount after purchase} = 78,592 \\
 - 48,000 \\
 \hline
 30,592
 \end{array}$$

∴ Therefore, 30,592 amount remains with her.

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

7236 x 65 = 405,340 (incorrect)

7236 x 56 = 405,216 (correct)

Difference = 405,340 - 405,216 = 65,124

∴ Thus, the student answer was greater than the correct answer by 65,124.