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Unit – 1

NUMBERS UP TO 99,99,99,999

Do you remember numbers till 9,99,999?

Let us solve some problems.

1. Write the period, place and place value of the encircled digit in the following numerals.

(a) 4 8 , 6 2 4 (c) 9 9, 7 8 3 (e) 1, 4 5, 3 2 6

(b) 3 0 , 9 5 2 (d) 4 , 8 1,6 5 9 (f) 3, 5 7, 0 2 6

2. Rewrite the following in ascending order.

(a) 4,83,654; 43,865; 4,38,654; 4,38,854

(b) 91,089; 9,10,849; 9,19,098; 9,14,089

3. Write the number names for the following numerals.

(a) 53,701 (d) 4,40,404

(b) 91,001 (e) 9,00,009

(c) 8,08,808 (f) 6,08,316

4. Fill in the blanks.

(a) The smallest 5-digit numeral = _____

(b) The successor of 99,999 = _____

(c) The numeral for four lakh four = _____

(d) One lakh = _____ thousands.

(e) 3,00,000 + 8,000 + 50 + 1 = _____

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Numbers Beyond 9,99,999

We know that the largest 6-digit number is–

9,99,999

Let us see what happens when we add 1 to 9,99,999.

Let us now enter the number 10,00,000 in the Indian Place Value Chart.

See! we have added one more column to the left in the Indian Place Value Chart.

Lakhs		Thousands		Ones		
Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
1	0	0	0	0	0	0

10,00,000 is read as Ten Lakh. It belongs to the period, Lakhs.

The smallest 7-digit number is 10,00,000 (ten lakh).

Now, let us read some 7-digit numbers.

Numeral	Number Name
39,84,000	Thirty nine lakh eighty four thousand.
18,00,046	Eighteen lakh forty six.
99,99,999	Ninety nine lakh ninety nine thousand nine hundred ninety nine.

Remember

While reading the numeral of a number, all the digits of a period and the name of the period (except ones) are read together.

99,99,999 is the greatest 7-digit number.

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Worksheet 1

1. **Write the number names for the following numerals using commas between periods. Also read them aloud.**

(a) 4935087	(d) 1011001	(g) 7183010	(j) 4904078
(b) 9300432	(e) 9005430	(h) 9999999	(k) 3520179
(c) 7080201	(f) 6358004	(i) 9090009	(l) 2200050

2. **Complete the table by writing the period, place and place value of the encircled digits. The first one is done for you.**

Numeral	Period	Place	Place Value
(a) 7 1 , 3 8 , 2 9 1	Lakhs	Ten lakhs	70 lakhs or 70,00,000
(b) 6 0 , 4 6 , 2 9 5			
(c) 8 3 , 2 1 , 0 6 9			
(d) 9 4 , 8 2 , 4 6 9			
(e) 6 1 , 8 0, 8 4 3			
(f) 4 , 3 2 , 1 0 0			
(g) 9 , 0 8 , 7 6 8			
(h) 1 5, 8 2, 9 6 4			

3. **Write the numerals using commas between periods.**

(a) Eighty one lakh thirty six thousand two hundred ninety six.

(b) Thirty four lakh seventeen thousand one hundred two.

(c) Seven lakh eight thousand nine hundred five.

(d) Forty lakh eighty nine thousand nine hundred five.

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(e) Ninety three lakh six thousand six.

(f) Thirty eight thousand thirteen.

(g) Sixty three lakh sixty thousand sixty.

(h) Twenty lakh two.

(i) Thirteen lakh six thousand five.

(j) Forty eight lakh ninety thousand three hundred.

Introducing One Crore

We know that the largest 7-digit number is–

99,99,999

99,99,999
+ 1
1,00,00,000

Let us see what happens when we add 1 to 99,99,999.

Let us now enter the number 1,00,00,000 in the Indian Place Value Chart.

See! we have added one more column to the left in the Indian Place Value Chart.

Crores	Lakhs		Thousands		Ones		
Crores	Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
1	0	0	0	0	0	0	0

1,00,00,000 is read as One Crore. It belongs to the period, Crores.

The smallest 8-digit number is 1,00,00,000 (one crore).

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Now, let us read some 8-digit numbers.

Numeral	Number Name
4,00,00,000	Four crore.
9,10,00,000	Nine crore ten lakh.
6,78,16,000	Six crore seventy eight lakh sixteen thousand.
5,00,70,560	Five crore seventy thousand five hundred sixty.
7,57,55,941	Seven crore fifty seven lakh fifty five thousand nine hundred forty one.
9,99,99,999	Nine crore ninety nine lakh ninety nine thousand nine hundred ninety nine.

9,99,99,999 is the greatest 8-digit number.

Worksheet 2

1. **Write down the periods and corresponding places of an 8-digit number.**

2. **Read aloud the following numerals. Also write their number names.**

   (a) 4,86,29,183 (d) 2,05,31,229 (g) 5,10,00,700 (j) 2,09,85,742

   (b) 2,60,15,354 (e) 9,00,71,318 (h) 6,00,00,006 (k) 9,43,02,001

   (c) 7,98,71,010 (f) 8,70,01,100 (i) 4,58,79,515 (l) 4,43,21,056

3. **Write down the smallest and greatest numerals of 8-digits.**

4. **Write the numerals using commas between periods.**

   (a) Five crore thirty lakh sixteen thousand nineteen.

   (b) Three crore one lakh forty seven thousand two hundred.

   (c) One crore fifteen thousand nine hundred sixty three.

   (d) Two crore ninety five lakh fifty two thousand two hundred seventy six.

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(e) Nine crore nine.

(f) Six crore twenty thousand twenty.

(g) One crore one lakh one thousand one.

(h) Four crore forty lakh four hundred fourteen.

(i) Eight crore thirteen lakh five.

(j) One crore thirty two lakh nineteen.

Introducing Ten Crore

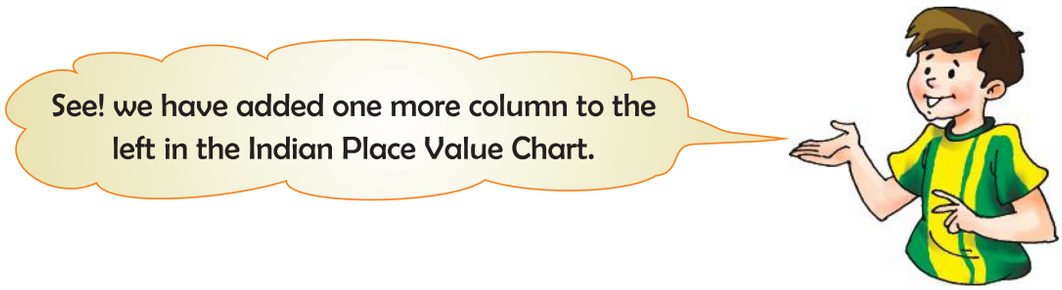
We know that the largest 8-digit number is–

9,99,99,999

9,99,99,999	
	+ 1
10,00,00,000	

Let us see what happens when we add 1 to 9,99,99,999.

Let us enter the number 10,00,00,000 in the Indian Place Value Chart.



Crores		Lakhs		Thousands		Ones		
Ten Crores	Crores	Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones
1	0	0	0	0	0	0	0	0

10,00,00,000 is read as Ten Crore. It belongs to the period, Crores.

The smallest 9-digit number is 10,00,00,000 (ten crore).

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Let us read some 9-digit numerals.

Numeral	Number Name
50,00,00,000	Fifty crore.
71,00,00,000	Seventy one crore.
35,56,00,000	Thirty five crore fifty six lakh.
41,03,11,800	Forty one crore three lakh eleven thousand eight hundred.
78,69,00,540	Seventy eight crore sixty nine lakh five hundred forty.
99,99,99,999	Ninety nine crore ninety nine lakh ninety nine thousand nine hundred ninety nine.

99,99,99,999 is the greatest 9-digit number.

Remember these relations

10 ones = 1 ten	10 tens = 1 hundred
10 hundreds = 1 thousand	10 thousands = 1 ten thousand
10 ten thousands = 1 lakh	10 lakhs = 1 ten lakh
10 ten lakhs = 1 crore	10 crores = 1 ten crore

The system of numeration that we have studied is known as the **Decimal System of Numeration** because in this system, we use ten symbols, namely 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. This system of numeration is also known as the **Hindu Arabic System of numeration.**

Worksheet 3

1. Write the number names for the following numerals.

(a) 41,26,81,505 (d) 94,23,00,841 (g) 91,00,05,369

(b) 80,08,80,000 (e) 37,40,00,001 (h) 29,35,00,019

(c) 60,03,58,241 (f) 90,00,00,009 (i) 51,08,07,004

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2. Complete the table by writing the period, place and place value of the encircled digits. The first one is done for you.

Numeral	Period	Place	Place Value
(a) 43, 8 6, 9 1, 708	Crore	Ten crore	Forty crore or 40,00,00,000
(b) 2 1, 86, 4 3, 0 1 0			
(c) 72, 8 3, 9 0, 4 7 8			
(d) 9, 0 1, 24, 4 5 6			
(e) 64, 2 3, 8 1, 0 1 6			
(f) 7 8, 92, 0 1, 5 6 9			

3. Write the numerals using commas between periods.

(a) Sixty one crore thirteen lakh forty eight thousand nine hundred.

(b) Eleven crore thirty six thousand sixteen.

(c) Nineteen crore three lakh seven hundred one.

(d) Fifty crore forty nine lakh thirty five thousand ten.

(e) Eighty crore eighty.

(f) Thirty five crore one lakh one thousand one.

(g) Twenty one crore thirty lakh seven hundred nine.

(h) Fourteen crore one lakh two.

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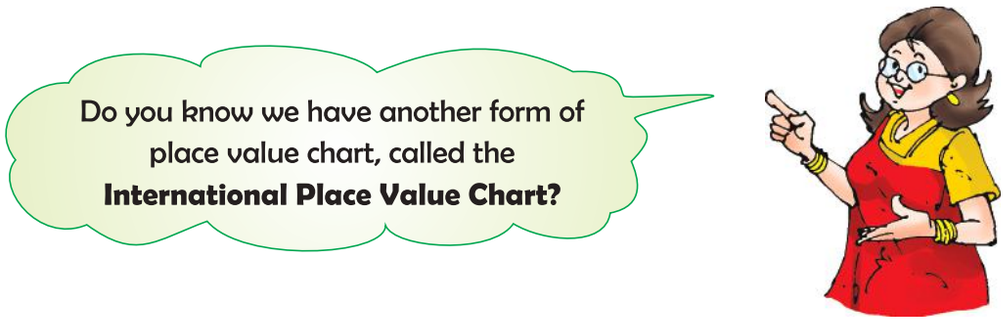
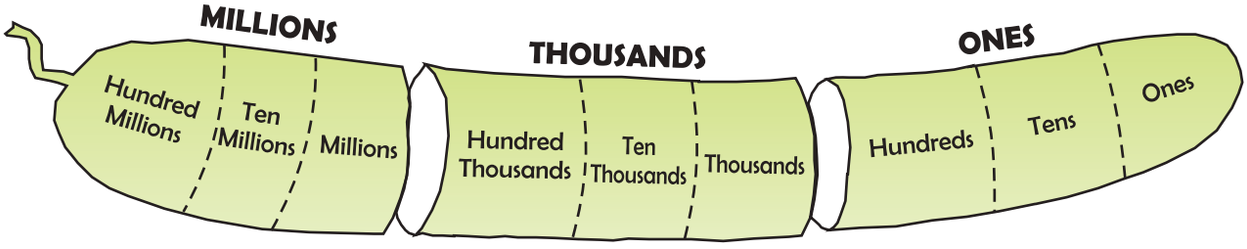
International Place Value



Observe the International Place Value Chart carefully.

Millions			Thousands			Ones		
Hundred Millions	Ten Millions	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
100,000,000	10,000,000	1,000,000	100,000	10,000	1,000	100	10	1

The nine places of a 9-digit number are grouped into three periods.



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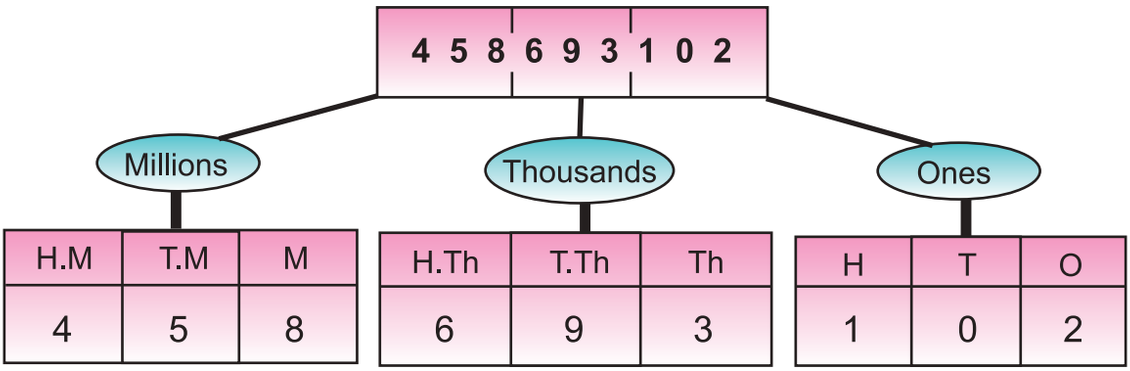
Observe the places of the numeral 458693102.



Now, let us read some numerals in International System of Numeration.

Remember

- Separate the periods using commas between them.
- Read all the digits in the same period together and name the period (except ones) along with them.

Numeral	Number Name
345,629,019	Three hundred forty five million six hundred twenty nine thousand nineteen.
148,003,681	One hundred forty eight million three thousand six hundred eighty one.
982,053,009	Nine hundred eighty two million fifty three thousand nine.

Remember these relations

100 thousands = 1 lakh

10 lakhs = 1 million

10 millions = 1 crore

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Worksheet 4

1. Rewrite the following numerals using commas in International System of Numeration and then read them aloud.

(a) 493182 (c) 97864351 (e) 125605189

(b) 10489752 (d) 98700105 (f) 670157213

2. Write the number names for the following numerals.

(a) 409,846 (d) 8,021,832 (g) 271,804,010

(b) 65,329,561 (e) 550,930,816 (h) 30,000,003

(c) 410,800,143 (f) 900,040,801 (i) 753,458,214

3. Write the numerals using commas as per International System.

(a) Thirty four million two hundred three thousand five hundred one.

(b) Two hundred seventy nine million seventeen thousand five hundred ninety.

(c) One hundred one million seventeen thousand five hundred ninety.

(d) Eighteen million nine hundred fifty thousand eight.

(e) Nine hundred million nine thousand nine.

(f) Four hundred forty million fourteen thousand four hundred forty.

(g) Nine hundred three million five hundred.

(h) One hundred million fifteen thousand four hundred five.

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Brain Teasers

1. Tick (✔) the correct answer.

(a) The place value of 6 in the number 265,431 is—

(i) Thousand (ii) Ten thousand

(iii) Sixty thousand (iv) Six hundred thousand

(b) The difference between the place values of 2 and 4 in the number 12,34,576 is–

(i) 2,00,000 (ii) 2,04,000 (iii) 4,000 (iv) 1,96,000

(c) The predecessor of 35,748,600 is–

(i) 24,637,599 (ii) 35,748,500 (iii) 35,748,599 (iv) 35,748,601

(d) The digit at the ten million place in the number 735,896,545 is–

(i) 7 (ii) 3 (iii) 5 (iv) 2

(e) 60 million = _____ crores

(i) 6 crores (ii) 60 crores (iii) 600 crores (iv) 10 crores

2. Draw an Indian place value chart showing the periods and places of any 9-digit number.

3. Draw an International place value chart showing the periods and places of any 9-digit number.

4. Look carefully at the commas between periods and then write the number names for the following:

(a) 35,68,043 (c) 104,601,843 (e) 3,084,001

(b) 29,568,194 (d) 28,00,16,493 (f) 9,001,348

5. Fill in the blanks.

(a) 1 million = _____ lakhs

(b) 1 lakh = _____ thousands

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(c) 1 crore = _____ millions

(d) 100 million = _____ crores

6. Complete the table by writing the period, place and place value of the encircled digit. Look carefully at the commas between periods before you answer the question. The first one is done for you.

Numeral	Period	Place	Place Value
(a) 5, 8 3, 9 2 1	Thousand	Ten thousand	80,000
(b) 6 4,00, 9 2 5			
(c) 8 4 3, 0 1 3			
(d) 4 9 5, 6 9 8, 1 5 6			
(e) 7, 8 1, 3 6, 2 4 8			
(f) 2 9, 4 3, 8 6, 1 0 0			

7. Form the smallest 8-digit number using the digits 7, 5, 0, 1, 2, 9, 8 and 4. Also write the number name of the numeral formed both in Indian System and in International System.

8. Write the successor (1 more) of the following:

(a) 48,36,959 (b) 9,99,99,999 (c) 56,09,999

9. Write the predecessor (1 less) of the following:

(a) 56,43,000 (b) 10,00,00,000 (c) 4,84,10,000

10. Find the sum of the place values of two fives in 35,46,52,983.

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Unit – 2

OPERATIONS ON LARGE NUMBERS

1. **Find the sum.**

   (a) 4,38,291; 35,605 and 3,19,278

   (b) 95,262; 6,15,893 and 3,20,503

2. **Find the difference.**

   (a) 3,84,962 and 5,73,248 (b) 9,00,000 and 7,11,498

3. **Find the product.**

   (a) 4,908 by 326 (b) 11,321 by 74

4. **Divide and check your answer.**

   (a) 4,182 by 13 (b) 2,000 by 45

5. **Ritesh is a kite maker. In one season, he sold 37,043 red kites, 42,620 blue kites and 27,986 green kites. How many kites did he sell in all?**

6. **If a factory produces 1,285 toy cars every day, how many toy cars will it produce in a year of 293 working days?**

7. **In a year, Rahul earns ₹ 72,600. How much will he earn monthly?**

8. **Fill in the blanks.**

   (a) 784 + 361 + ☐ = 426 + ☐ + 784

   (b) 4,935 – ☐ = 4,935

   (c) ☐ × 1 = 846

   (d) ☐ ÷ 48 = 0

   (e) 386 × 5,000 = ☐

   (f) 25 × ☐ = 25,000

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Addition and Subtraction of Large Numbers

Let us add and subtract large numbers.

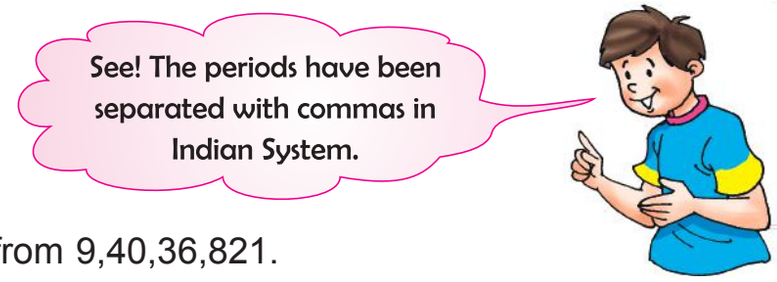
> **Remember**
> We have to add or subtract large numbers in the same way as we added and subtracted 5-digit and 6-digit numbers.

Example 1: Add 2,45,61,386; 4,39,03,424 and 5,20,26,572.

Solution:

$$\begin{array}{rr} & 24561386 \\ + & 43903424 \\ + & 52026572 \\ \hline & 120491382 \end{array}$$

Sum = 12,04,91,382



Example 2: Subtract 4,81,27,415 from 9,40,36,821.

Solution:

$$\begin{array}{rr} & 94036821 \\ - & 48127415 \\ \hline & 45909406 \end{array}$$

Difference = 4,59,09,406

Worksheet 1

1. Find the sum.

(a) 2,92,342; 14,54,651; 46,81,509

(b) 4,14,142; 49,85,389; 26,14,758

(c) 3,00,286; 13,03,089; 85,09,10,008

(d) 60,32,85,862; 12,40,31,029; 7,01,96,253

(e) 1,82,95,067; 7,06,53,248; 85,23,15,901

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(f) 8,43,26,198; 39,46,045; 1,83,49,730

(g) 1,23,45,678; 89,43,261; 5,97,86,009

(h) 4,02,36,754; 3,21,33,046; 2,95,17,354

2. Subtract.

(a) 13,91,803 from 52,09,123

(b) 25,18,624 from 40,00,000

(c) 3,65,17,298 from 8,79,25,149

(d) 73,82,005 from 90,28,583

(e) 3,62,71,843 from 4,98,07,916

(f) 3,89,04,392 from 8,13,00,896

(g) 6,23,94,389 from 8,03,09,421

(h) 1,98,76,432 from 5,23,45,678

Word Problems

We need to do addition and subtraction in our daily life. Let us study some examples.

Example 3: In the year 2011, the population of Kerala, Punjab and Haryana was 3,34,06,061; 2,77,43,338 and 2,53,51,462 respectively. Find the total population of the three states in the year 2011.

Solution:

Population of Kerala in 2011	=	33406061
Population of Punjab in 2011	=	27743338
Population of Haryana in 2011	=	+ 25351462
Population of the three states in 2011	=	86500861

The total population of the three states in 2011 was 8,65,00,861.

Example 4: Mr Ajay deposited ₹ 2,78,475 in a bank in his account. Later, he withdrew ₹ 1,55,755 from his account. How much money was left in his account in the bank?

Solution:

Amount deposited	=	₹ 278475
Amount withdrawn	=	– ₹ 155755
Amount left in his account	=	₹ 122720

Mr Ajay has ₹ 1,22,720 in his bank account.

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Worksheet 2

1. Solve the following word problems.

(a) A soap factory produced 26,92,645 soap cakes in one year. In the next year, it produced 8,67,205 soap cakes more. How many soap cakes did the factory produce in the second year?

(b) In one year, Mr Mohan earned ₹ 5,57,088, his wife earned ₹ 3,23,672 and their son earned ₹ 2,96,750. How much money did Mr Mohan's family earn in one year?

(c) In an examination conducted by an educational organisation, 15,83,693 candidates appeared. Out of these 7,49,865 passed. How many candidates failed in the examination?

(d) In an election, the winning candidate got 6,28,496 votes and his rival got 4,56,298 votes. If 3,846 votes were declared invalid, what was the total number of votes polled?

(e) Find the sum of the greatest 8-digit, 7-digit and 6-digit numbers.

Multiplication and Division of Large Numbers

Let us multiply large numbers.

Example 5: Multiply 35,983 by 475.

Solution:

$$
\begin{array}{rl}
 & 35983 \\
\times & 475 \\
\hline
 & 179915 \quad \leftarrow \text{Multiply 35983 by 5} \\
+ & 2518810 \quad \leftarrow \text{Multiply 35983 by 70} \\
+ & 14393200 \quad \leftarrow \text{Multiply 35983 by 400} \\
\hline
 & 17091925 \quad \leftarrow \text{Product}
\end{array}
$$

The product of 35,983 and 475 is 1,70,91,925.

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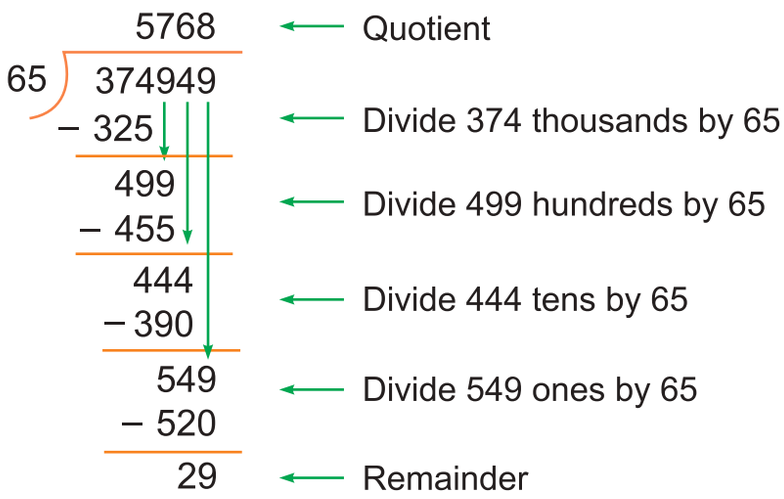
Now, let us divide 5-digit, 6-digit and 7-digit numbers by 2-digit and 3-digit numbers.

Example 6: Divide 3,74,949 by 65.

Solution:



We get, **Quotient = 5,768; Remainder = 29**

Worksheet 3

1. Find the product.

(a) 3,847 × 431
(b) 8,123 × 956
(c) 6,098 × 627
(d) 10,513 × 218
(e) 90,125 × 705
(f) 25,079 × 385
(g) 46,239 × 873
(h) 7,653 × 2,182

2. Find the quotient and remainder.

(a) 46,028 ÷ 84
(b) 74,862 ÷ 73
(c) 90,768 ÷ 196
(d) 9,00,864 ÷ 95
(e) 8,88,888 ÷ 888
(f) 60,90,839 ÷ 123
(g) 68,931 ÷ 235
(h) 14,50,145 ÷ 145

Word Problems

We need to do multiplication and division in various situations in our daily life. Let us study some examples.

Example 7: Anil runs 3,525 metres daily in the morning. How many metres will he run in one year? Convert your answer into kilometres.

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Solution: Distance ran in one day = 3,525 metres

Distance ran in one year = 3,525 × 365

(We know that one year has 365 days.)

```
  3525
×  365
 17625
+ 211500
+1057500
 1286625
```

Anil ran 12,86,625 metres in one year.

Converting into kilometres

We know that 1000 metres = 1 kilometre

So, 12,86,625 metres = 1286625 ÷ 1000

= 1,286 kilometres and 625 metres.

Example 8: A box contains 144 pencils. How many boxes are needed to pack 1,00,080 pencils?

Solution: Total number of pencils = 1,00,080

Number of pencils in one box = 144

Number of boxes needed = 1,00,080 ÷ 144

Thus, number of boxes needed is 695.

```
      695
144 ) 100080
    - 864
      1368
    - 1296
       720
     - 720
         0
```

Worksheet 4

1. Solve the following word problems.

(a) A uniform set costs ₹ 1,325. What will be the cost of 567 uniform sets?

(b) One packet contains 385 sweets. How many sweets can be packed in 52,690 packets?

(c) A rocket travels 7,59,600 km in 240 hours. How many kilometres will the rocket travel in one hour?

(d) Mr Mohan earns ₹ 19,750 every month. How much will he earn in 8 years?

(e) During floods, 43,725 villagers became homeless. The government put up tents, each tent housing 265 villagers. How many tents were put up?

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Value Based Questions

1. Rohan's father had ₹ 1,75,845 in his bank account. He withdrew ₹ 85,975 for repairing his house. Rohan had a friend Sunil whose family was very much in need of money for paying the hospital bills of his sick mother. Rohan wished to help Sunil and his family. He spoke to his father and his father gave him ₹ 4,575, out of the money withdrawn, to help Sunil. Sunil was happy and thanked Rohan for the help.

   (a) How much money is left in Rohan's father's bank account?

   (b) How much money is left for repairing the house?

   (c) Which value is exhibited by this act?

2. Winter season is enjoyed by all. It is very important to protect ourselves with warm clothes. Schools of a particular locality decided to donate warm clothes

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and blankets to people of nearby area who cannot afford to buy them. There were 38 schools and each school donated ₹ 25,365 for buying warm clothes and blankets, which were then distributed among people of nearby area.

(a) How much money was donated by all the schools?

(b) Suppose you see an old woman on the road shivering with cold. What will you do to help her?

Brain Teasers

1. Tick (✔) the correct answer.

(a) The sum of the greatest 4-digit number and the smallest 6 digit number is–

(i) 1099999 (ii) 109999 (iii) 900000 (iv) 199999

(b) 9999 ÷ 99 = _____ .

(i) 11 (ii) 101 (iii) 99 (iv) 110

(c) Digit in the ones place of the product of 783 and 896 is–

(i) 9 (ii) 2 (iii) 8 (iv) 6

(d) Digit in the hundreds place of the difference of 53883 and 41834 is–

(i) 9 (ii) 2 (iii) 0 (iv) 4

(e) Tens digit in the sum of 13846, 62381, 57402 is–

(i) 2 (ii) 3 (iii) 4 (iv) 5

2. Replace ☐ by the correct digit.

(a)

	3	8	2	☐	6	7
+	6	☐	4	8	☐	6
+	☐	8	☐	5	6	☐
☐	9	6	9	9	6	8

(b)

	9	4	☐	0	8	☐	4
–	3	8	5	2	☐	1	5
☐	☐	4	8	2	0	☐	

3. Find the product.

(a) 9,80,406 × 708

(b) 5,67,894 × 625

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4. **Divide.**

   (a) 99,99,999 ÷ 9,999 (b) 6,85,432 ÷ 234

5. **Subtract 93,84,236 from the sum of 3,95,08,625 and 74,38,906.**

6. **The total number of men, women and children in a state is 93,86,493. If the number of men is 26,38,755 and that of women is 25,29,431, find the number of children.**

7. **A dealer purchased 285 washing machines. If the cost of one washing machine is ₹ 9,825, find the cost of the purchased washing machines.**

8. **Find the product of the greatest 5-digit and 3-digit numbers.**

9. **An engine pumps 2,85,000 litres of water in five hours. How many litres of water will the engine pump in one minute?**

10. **Find the value of 5,43,86,291 + 1,09,853 – 96,298.**

+CMYK+