

# Appendices

પ્ર. 1 નીચેના પ્રશ્નોનનો જવાબ યોગ્ય વિકલ્પ પસંદ કરીને આપો.

10

- (1) જે સંખ્યાનો દશકનો અંક હોય તેવી બે અંકની સૌથી મોટી સંખ્યા કઈ છે ? ( )  
(A) 70 (B) 97 (C) 79 (D) 71
- (2) જે સંખ્યાનો દશકનો અંક 5 હોય તેવી બે અંકની સૌથી નાની સંખ્યા કઈ છે ? ( )  
(A) 55 (B) 59 (C) 15 (D) 51
- (3) જેનો એકમનો અંક 2 હોય તેવી બે અંકની સૌથી મોટી સંખ્યા કઈ છે ? ( )  
(A) 92 (B) 29 (C) 21 (D) 12
- (4) 8, 2 અને 4 થી બનતી ત્રણ અંકની સૌથી નાની સંખ્યા જણાવો ( )  
(A) 248 (B) 482 (C) 842 (D) 824
- (5) 5, 4 અને 9 થી બનતી ત્રણ અંકની સૌથી મોટી સંખ્યા જણાવો ( )  
(A) 459 (B) 594 (C) 954 (D) 495
- (6) નીચેનામાંથી કઈ સંખ્યાને 3 વડે ની:શેષ ભાંગી શકાય છે ? ( )  
(A) 25 (B) 37 (C) 42 (D) 40
- (7) નીચેનામાંથી કઈ સંખ્યા અવિભાજ્ય સંખ્યા છે ? ( )  
(A) 1 (B) 5 (C) 9 (D) 8
- (8) સૌથી પ્રથમ વિભાજ્ય સંખ્યા કઈ છે ? ( )  
(A) 2 (B) 1 (C) 3 (D) 4
- (9) નીચેનામાંથી કઈ સંખ્યા 12 નો અવયવ છે ? ( )  
(A) 4 (B) 8 (C) 5 (D) 24
- (10) નીચેનામાંથી કઈ સંખ્યા 11 નો અવયવ છે ? ( )  
(A) 1 (B) 2 (C) 33 (D) 20

પ્ર. 2 ખાલી જગ્યા પૂરો.

10

- (1) 1 કરોડ = ..... લાખ
- (2)  $362 = 300 + \dots + 2$
- (3)  $1850 = 1000 + \dots + 50 + \dots$
- (4) ગુણાકાર માટેનો એકમ ઘટક..... છે.
- (5)  $65 = 13 \times \dots$
- (6)  $0 \div 5 = \dots$
- (7) .....એ દરેક સંખ્યાનો અવયવ છે.
- (8) ..... એ વિભાજ્ય કે અવિભાજ્ય સંખ્યા નથી.
- (9) 15 નો મોટામાં મોટો અવયવ..... છે.
- (10) 3 અને 7 નો લ.સા.અ. .... છે.

પ્રશ્ન 3 નીચેની સંખ્યાઓના અવિભાજ્ય અવયવ પાડો.

6

- (1) 75
- (2) 88
- (3) 48

પ્રશ્ન 4 નીચેની સંખ્યાઓનો ગુ.સા.અ. શોધો.

6

(1) 12 અને 32

(2) 15 અને 20

(3) 22 અને 44

પ્રશ્ન 5 નીચેની સંખ્યાઓનો લ.સા.અ. શોધો.

6

(1) 8 અને 20

(2) 10 અને 24

(3) 16 અને 30

પ્રશ્ન 6 ગણતરી કરો (નીચેના દાખલા ગણો)

12

|     |               |     |               |     |      |     |      |
|-----|---------------|-----|---------------|-----|------|-----|------|
| (1) | 4258          | (2) | 2980          | (3) | 147  | (4) | 843  |
|     | + 2850        |     | + 5215        |     | × 28 |     | × 56 |
|     | <u>+ 9219</u> |     | <u>+ 7224</u> |     |      |     |      |

(5) 8982  
- 6984

(6) 1071 ÷ 7

પ્રશ્ન 7 નીચેના વિધાનો ખરાં છે કે ખોટાં તે જણાવો

10

- |   |     |
|---|-----|
| (1) 26544 એ 7 વડે નિ:શેષ ભાગી શકાય છે.              | ( ) |
| (2) 455 એ 10 વડે વિભાજ્ય છે.                        | ( ) |
| (3) 2 એ સૌથી પ્રથમ અવિભાજ્ય સંખ્યા છે               | ( ) |
| (4) અવિભાજ્ય સંખ્યાને ફક્ત બે જ અવયવ હોય છે.        | ( ) |
| (5) 10 અને 15 નો ગુ.સા.અ. 10 છે.                    | ( ) |
| (6) 50 એ 5 નો અવયવી છે.                             | ( ) |
| (7) 2 ના અવયવી હંમેશા બેકી સંખ્યા જ હોય છે.         | ( ) |
| (8) 10 ના અવયવીનો એકમનો અંક 5 અને 0 જ હોય શકે.      | ( ) |
| (9) 1 થી 10 વચ્ચે કુલ પાંચ અવિભાજ્ય સંખ્યા આવેલ છે. | ( ) |
| (10) કોઈપણ સંખ્યાના અસંખ્ય અવયવી આવેલ હોય છે.       | ( ) |

પ્ર. 1 નીચેના પ્રશ્નોનનો જવાબ યોગ્ય વિકલ્પ પસંદ કરીને આપો.

10

- (1) જે સંખ્યાનો દશકનો અંક 7 હોય તેવી બે અંકની સૌથી મોટી સંખ્યા કઈ છે ? ( )  
(A) 70 (B) 97 (C) 79 (D) 71
- (2) જે સંખ્યાનો દશકનો અંક 4 હોય તેવી બે અંકની સૌથી નાની સંખ્યા કઈ છે ? ( )  
(A) 44 (B) 49 (C) 14 (D) 41
- (3) જેનો એકમનો અંક 3 હોય તેવી બે અંકની સૌથી મોટી સંખ્યા કઈ છે ? ( )  
(A) 93 (B) 39 (C) 31 (D) 13
- (4) 7, 3 અને 5 થી બનતી ત્રણ અંકની સૌથી નાની સંખ્યા જણાવો ( )  
(A) 735 (B) 357 (C) 573 (D) 375
- (5) 5, 4 અને 2 થી બનતી ત્રણ અંકની સૌથી મોટી સંખ્યા જણાવો ( )  
(A) 452 (B) 542 (C) 254 (D) 425
- (6) નીચેનામાંથી કઈ સંખ્યાને 3 વડે નિઃશેષ ભાંગી શકાય છે ? ( )  
(A) 25 (B) 37 (C) 48 (D) 40
- (7) નીચેનામાંથી કઈ સંખ્યા અવિભાજ્ય સંખ્યા છે ? ( )  
(A) 1 (B) 5 (C) 9 (D) 8
- (8) સૌથી પ્રથમ વિભાજ્ય સંખ્યા કઈ છે ? ( )  
(A) 2 (B) 1 (C) 3 (D) 4
- (9) નીચેનામાંથી કઈ સંખ્યા 10 નો અવયવ છે ? ( )  
(A) 4 (B) 8 (C) 5 (D) 20
- (10) નીચેનામાંથી કઈ સંખ્યા 11 નો અવયવ છે ? ( )  
(A) 1 (B) 2 (C) 55 (D) 20

પ્ર. 2 ખાલી જગ્યા પૂરો.

10

- (1) 1 લાખ = ..... હજાર.
- (2)  $382 = 300 + \dots + 2$
- (3)  $4722 = 4000 + \dots + 20 + \dots$
- (4) ગુણાકાર માટેનો એકમ ઘટક..... છે.
- (5)  $85 = 5 \times \dots$
- (6)  $0 \div 9 = \dots$
- (7) .....એ દરેક સંખ્યાનો અવયવ છે.
- (8) ..... એ વિભાજ્ય કે અવિભાજ્ય સંખ્યા નથી.
- (9) 12 નો મોટામાં મોટો અવયવ..... છે.
- (10) 5 અને 9 નો લ.સા.અ. .... છે.

પ્રશ્ન 3 નીચેની સંખ્યાઓના અવિભાજ્ય અવયવ પાડો.

6

- (1) 45
- (2) 56
- (3) 36

પ્રશ્ન 4 નીચેની સંખ્યાઓનો ગુ.સા.અ. શોધો.

6

(1) 16 અને 30

(2) 18 અને 12

(3) 20 અને 45

પ્રશ્ન 5 નીચેની સંખ્યાઓનો લ.સા.અ. શોધો.

6

(1) 10 અને 15

(2) 18 અને 24

(3) 22 અને 55

પ્રશ્ન 6 ગણતરી કરો (નીચેના દાખલા ગણો)

12

|     |               |     |               |     |                 |     |                 |
|-----|---------------|-----|---------------|-----|-----------------|-----|-----------------|
| (1) | 3529          | (2) | 1712          | (3) | 135             | (4) | 745             |
|     | + 1822        |     | + 4351        |     | × 49            |     | × 56            |
|     | <u>+ 8735</u> |     | <u>+ 9768</u> |     | <u>        </u> |     | <u>        </u> |

(5) 8982

(6) 1085 ÷ 7

- 6895

પ્રશ્ન 7 નીચેના વિધાનો ખરાં છે કે ખોટાં તે જણાવો

10

- |   |     |
|---|-----|
| (1) 26502 એ 7 વડે નિઃશેષ ભાગી શકાય છે.              | ( ) |
| (2) 365 એ 10 વડે વિભાજ્ય છે.                        | ( ) |
| (3) 2 એ સૌથી પ્રથમ અવિભાજ્ય સંખ્યા છે               | ( ) |
| (4) અવિભાજ્ય સંખ્યાને ફક્ત બે જ અવયવ હોય છે.        | ( ) |
| (5) 10 અને 15 નો ગુ.સા.અ. 10 છે.                    | ( ) |
| (6) 35 એ 5 નો અવયવી છે.                             | ( ) |
| (7) 2 ના અવયવી હંમેશા બેક્રી સંખ્યા જ હોય છે.       | ( ) |
| (8) 10 ના અવયવીનો એકમનો અંક 5 અને 0 જ હોય શકે.      | ( ) |
| (9) 1 થી 10 વચ્ચે કુલ પાંચ અવિભાજ્ય સંખ્યા આવેલ છે. | ( ) |
| (10) કોઈપણ સંખ્યાના અસંખ્ય અવયવી આવેલ હોય છે.       | ( ) |

## Activity-1

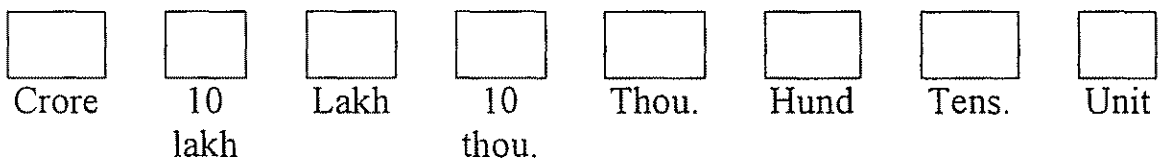
### Specific Objectives:

- Students will be able to understand place value.
- Students will be able to find place value of any digit in any number.
- Students will be able to read large numbers.
- Students will be able to write the numbers in expanded form.

### Activity:-

First of all the class is divided into two groups and these groups are taken to the ground. The two groups play the game. Out of the two groups, one group starts the game. For this

- Researcher assigns numbers 0 to 9 to some students.
- Eight squares are marked on the ground.
- On these squares unit, tens, hundred, thousand, ten thousand, lakh, ten lakh and crore is indicated as below:-

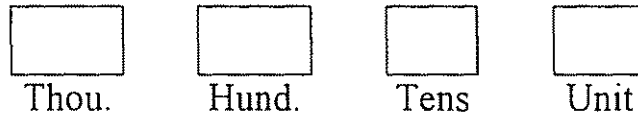


Now the musical chair game is started. The students assigned with numbers move around the squares and when music stops they stand on the squares. The number so found is read by the opponent group. The same activity is repeated for 5 times.

Now the groups are reversed and the same activity is repeated for 5 times.

The researcher ensures that each and every student is able to read the number as large as crore.

In the next round of the same activity the researcher removes four squares. Now only four squares are left;



The same numbers move around the squares and takes the position when music stops. Suppose the number so obtained is 4357

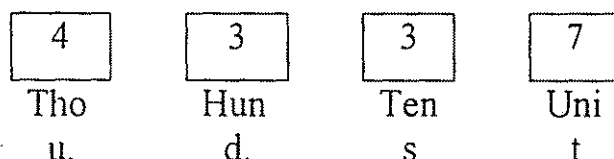
Researcher explains that if 4 comes in place of thousand then its place value becomes  $4 \times 1000$  i.e. 4000. Likewise the place values of 3, 5 and 7 is  $3 \times 100 = 300$ ;  $5 \times 10 = 50$  and  $7 \times 1 = 7$ .

Researcher ensures that each student is able to find the place value.

The same activity is used to explain the expansion of numbers. Like the above number can be written as

$$4000 + 300 + 50 + 7 \text{ (expanded form)}$$

Researcher ensures that students are able to write the numbers in expanded form. The activity is performed for several times so that students can write any number in expanded form.



## Activity 1 Multiples

### Objectives:-

Students should be able to:-

- (1) Find the multiples of any number
- (2) Understand the concept of multiples

Material used: "Gillie danda"

### Procedure:-

1. Researcher first of all takes the students to the play ground of the school.
2. He tells the rules to play "gilli and danda".
3. During the play 'dande' of different lengths are taken and a definite number is given to each 'danda'.
4. During the measurement of distance by students, researchers observes how they measure the distance.
5. then he asks students have do they measure the distance and how do they get particular number.
6. Some students reply that they read the table of the number assigned to that particular "danda". Some other students reply that they go on adding the same number.
7. Researcher now emphasis that if any number is multiplied by natural numbers then the numbers so obtained are called the multiplies of that number:-



$$\begin{array}{rcl}
 \text{For e.g.} & 5 \times 1 & = & 5 \\
 & 5 \times 2 & = & 10 \\
 & 5 \times 3 & = & 15
 \end{array}
 \left. \vphantom{\begin{array}{rcl} 5 \times 1 & = & 5 \\ 5 \times 2 & = & 10 \\ 5 \times 3 & = & 15 \end{array}} \right\} 5, 10, 15 \text{ are multiples of } 5.$$

8. Researcher now asks students to tell the multiples of 3, 4, 6 and 7 and ensures that concept of multiples is clear to students.

**Activity: Lowest Common Multiples (L.C.M.)**

**Objectives:** Students should be able to

1. Find the lowest common multiple.

**Material used:** 2 Empty boxes, copy, pen, marbles.

**Procedure:-**

1. Researcher keeps 2 empty boxes in the middle and asks four students to come. Two students stand in front of one box. One of their two students given marbles and the other one keeps one copy and a pen with him. Likewise two other students stand in front of other box.
2. The first pair is given instruction that they have to fill the box with marbles in group of three. The other pair fills the box in group of four marbles at a time.
3. The other student of each pair writes the total number of marbles collected in its respective box.
4. Researcher asks to point out the situations when both pair of students have some number of marbles, students list the situations when they get same number of marbles.

5. Now the researcher asks that in these situations how many marbles are there. Students answer 12, 24, 36, 48 etc.
6. Students are asked the lowest equal number of marbles, students answer "12".,
7. Now researcher explains that "12" is the lowest common multiple of 3 and 4.

He generalizes that for any given numbers first of all their multiples are found and then from their same multiples the least multiple is selected. This selected multiple is called lowest common multiple of those numbers.

**Activity:** Factors: composite number and prime number.

**Material:** Marble, copy, pen

**Objective:** Students should be able to

- Find factors of given numbers.
- Identify composite number and prime number.
- Distinguish composite number and prime number.

**Procedure:-**

1. Researcher distributes marbles to students and give them instruction to make different groups of marbles in such a way that in each group number of marbles remain same but no marble is left behind.
2. Students are given 6 marbles and according to instruction they make certain groups. The groups they form may be as follows:-

3. Researcher explains that each time we divide 6 in equal parts and every time we get the same product. 6 can be divided in four ways.
4. Here the no. of groups and no. of marbles in each group are the factors of six. Therefore factors of 6 are, 1,2,3,&6.
5. In the same way students are given 7 marbles and they are told to make the groups. Students try but fail. They say that for this particular number only two groups are possible (1) One group having seven marbles (2) Seven groups having seven marbles.
6. Researcher asks the factors for 7 students reply that there are only two factors for 7 i.e. 1 and 7.
7. Researcher explains that any number having only two factors is called 'prime number', and the number having more than two factors is called "composite number". For e.g. 4,8,10. etc.

**Activity** : Highest common factor

**Materials** : Copy, pen, marbles.

**Procedure:-**

1. Researcher keeps two boxes in front of students and tells them that one of the box has to be filled with 12 marbles and other box with 18 marbles.
2. They can put the marbles in box one by one or in groups.
3. Researcher asks the no. of groups of marbles which students would like to fill in both the boxes.

4. Students reply that for the 1 box in which 12 marbles are to be filled, may be done in following ways:-

- (1) One by one
- (2) In groups of two
- (3) In groups of three
- (4) In groups of four and
- (5) In groups of six.

Likewise for the second box they answer:-

- (1) One by one
- (2) In groups six.

5. Now researcher asks the same groups which are used in two cases, they answer.

- (1) In 1's    (2) In 2's    (3) In 3's    (4) In 6's

6. He asks that identify the group which is having highest number of marbles and it is common to both cases, students answer that highest common group of 'six'.

7. Now researcher explains that '6' the highest common factor (H.C.F.) of 12 and 18.

8. Researcher gives some examples and ensures that students are able to find out H.C.F.

## Activity-2

### Alternative method

**Objectives :** Students should be able to

- Understand the use of alternative methods.
- Apply the alternative methods to solve the problems.
- Practice basic mathematical operations through new alternative methods.

### Procedure :

1. Researcher gives some multiplication exercise to children asks them to solve.
2. Now he introduce a new method through which multiplication of any two numbers between 10 and 20 can be done quickly.
3. He gives some examples and solve multiplication in two steps.

Eq.-1  $12 \times 18$

I Step =  $12 + 8 = 20$  (tens)

II Steps =  $2 \times 8 = 16$  (ones)

$$20 \text{ tens} + 16 \text{ ones} = 200 + 16 = 216$$

Eq.2  $15 \times 19$

I Step =  $15 + 9 = 20$  (tens)

II Steps =  $5 + 9 = 14$  (ones)

$$24 \text{ tens} + 14 \text{ ones} = 240 + 14 = 254$$

4. Now the researcher asks students to solve some other problems of multiplication using the same method, students solve the problems in their notebooks. Researcher ensures that students have solved the problem correctly.

5. Having ensured that students are able to solve, researcher introduces another method to solve multiplication. For this he gives some instructions to students.

**Instructions :**

1. Take any two numbers having two digits each.
2. Make half of the first number and double of the second.
3. Do the same thing till you get one in one of the two columns.
4. Now add all the numbers in second column that are opposite the add numbers in the first column.

Researcher given an example –

|                       |          |
|-----------------------|----------|
| Multiply              | 68 x 26  |
| half of the first and | 34 x 52  |
| double of the second  | 17 x 104 |
|                       | 8 x 208  |
|                       | 4 x 416  |
|                       | 2 x 832  |
|                       | 1 x 1664 |

|                              |               |
|------------------------------|---------------|
| Add all the numbers          | 104           |
| in second column that        | <u>+ 1664</u> |
| are opposite the odd         | 1768          |
| numbers in the first column. |               |

Here a note is given to students –

**Note:** If you get such number where half is not a complete number then its proceeding number and then make its half.

5. Researcher introduces another method for multiplication .
6. He prepares eight strips of paper through which multiplication is shown.

|   |        |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
|   | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      |
| 1 | 0<br>2 | 0<br>3 | 0<br>4 | 0<br>5 | 0<br>6 | 0<br>7 | 0<br>8 | 0<br>9 |
| 2 | 0<br>4 | 0<br>6 | 0<br>8 | 1<br>0 | 1<br>2 | 1<br>4 | 1<br>6 | 1<br>8 |
| 3 | 0<br>6 | 0<br>9 | 1<br>2 | 1<br>5 | 1<br>8 | 2<br>1 | 2<br>4 | 2<br>7 |
| 4 | 0<br>8 | 1<br>2 | 1<br>6 | 2<br>0 | 2<br>4 | 2<br>8 | 3<br>2 | 3<br>6 |
| 5 | 1<br>0 | 1<br>5 | 2<br>0 | 2<br>5 | 3<br>0 | 3<br>5 | 4<br>0 | 4<br>5 |
| 6 | 1<br>2 | 1<br>8 | 2<br>4 | 3<br>0 | 3<br>6 | 4<br>2 | 4<br>8 | 5<br>4 |
| 7 | 1<br>4 | 2<br>1 | 2<br>8 | 3<br>5 | 4<br>2 | 4<br>9 | 5<br>6 | 6<br>3 |
| 8 | 1<br>6 | 2<br>4 | 3<br>2 | 4<br>0 | 4<br>8 | 5<br>6 | 6<br>4 | 7<br>2 |
| 9 | 1<br>8 | 2<br>7 | 3<br>6 | 4<br>5 | 5<br>4 | 6<br>3 | 7<br>2 | 8<br>1 |

7. With the help of this researcher introduces latter are placed multiplication of two digits. In this the products within the proper bisected rectangles and added diagonally for the sum.

8. He gives following examples

$$18 \times 15 \quad \begin{array}{|c|c|} \hline 1 & 5 \\ \hline 0 & 0 \\ \hline 1 & 5 \\ \hline 0 & 4 \\ \hline 8 & 0 \\ \hline \end{array} \quad \begin{array}{|c|c|} \hline 9 \\ \hline 1 & 1 \\ \hline 8 & 8 \\ \hline 4 & 4 \\ \hline 5 & 5 \\ \hline \end{array} \quad \begin{array}{l} 1 \\ 2 \\ 8 \\ 5 \end{array}$$

Answer = 270

Answer = 275

9. In the same way 3 digit and 4 digit multiplication is also explained.

10. Researcher ensures

= Objectives – same

**Procedure :**

1. Researcher introduces an alternative method for summation in which one of the numbers is written in expanded form and then they are added.

2. He gives some examples –

$$\begin{aligned} \text{(i)} \quad 35 + 23 &= 35 + (20 + 3) \\ &= (35 + 20) + 3 \\ &= 55 + 3 \\ &= 58 \end{aligned}$$

$$\begin{aligned} \text{(ii)} \quad 158 + 38 &= 158 + (30 + 8) \\ &= 188 + 8 \end{aligned}$$

3. He gives some more examples.

**Puzzle one – Proving your age –**

(i) Multiply the number  $a$  by any other number lower than?

(ii) Subtract this product from 10 times your age.

(iii) The first two digits plus the last digit gives you your age

e.g.  $9 \times 6 = 54$

$$10 \times 30 \text{ (age)} = 300$$

$$300 - 54 = 246$$

$$24 + 6 = 30 \text{ (Your age)}$$



### **Puzzle two – Number is always 5**

- (i) Write any number
- (ii) Add the next highest number
- (iii) Add 9 to the sum
- (iv) Divide by 2 and subtract the original number
- (v) The result is always 5.

e.g.  $5 + 6 = 11$

$$11 + 9 = 20$$

$$20 \div 2 = 10$$

$$10 - 5 = 5$$

### **Puzzle three – multiplying by 9**

- (i) Multiply any number by 9
- (ii) Check but the sum of the digits in the answer
- (iii) The remainder will be exactly divisible by 9

e.g. 16 (number chosen)

61 (reversed)

Subtract 45

45 is divisible by 9

### **Puzzle 5 Number is always 10, 890**

1. Write four of the largest digits in descending sequence –
2. Reverse the order the and subtract
3. Reverse again and add result is always 10, 890

$$8765$$

$$\begin{array}{r} - 5678 \\ \hline 3087 \end{array}$$

$$\begin{array}{r} + 7803 \\ \hline \end{array}$$

**Puzzle 6 – Guessing a number**

1. Pick any number 1 through 8
2. Multiply the number by 3
3. Add one to the product
4. Multiply the sum by 3
5. Add 8 to the product
6. The answer is the tens figures of the sum

e.g.  $5 + 3 = 15$

$$15 + 1 = 16$$

$$16 \div 3 = 48$$

$$48 + 8 = 56$$

Answer is 5 (tens figure of sum)

**Puzzle 7 : The figure 9**

Look at the table of 9 and observe the pattern.

$$1 \times 9 = 9$$

$$2 \times 9 = 18 \quad - \text{The ones column in the products decrease in order}$$

$$3 \times 9 = 27 \quad - \text{The tens column in the products increase in order}$$

$$4 \times 9 = 36 \quad - \text{The sum of each product totals 9}$$

$$5 \times 9 = 45$$

$$6 \times 9 = 54$$

$$7 \times 9 = 63$$

$$8 \times 9 = 72$$

$$9 \times 9 = 81$$

### Puzzle 8 : The Mystery number

**Instructions** – Use each number once

Cross out the number when it is used

1. Two numbers whose sum is 3
2. Two number whose sum is 9
3. Two numbers whose sum is 12
4. Two numbers whose sum is 15
5. The number that is left is the mystery number 7

|   |   |   |
|---|---|---|
| 1 | 2 | 3 |
| 4 | 5 | 6 |
| 7 | 8 | 9 |

**Puzzle 9** : Arrange the numerals 1 through 9 in such a way that the sum is

100

$$47 \quad 98 \quad 47 + 15 + 36 = 98$$

$$15 \quad 2 \quad 98 + 2 = 100$$

$$\begin{array}{r} \underline{36} \quad \underline{100} \\ \underline{98} \end{array}$$

**Puzzle 10** :

- As nail climb up a fence 20 feet high, fine fect every day and slip down four feet every night. At this rate how long will it take the snail to reach the top ?

Answer 16 days

It gains one foot every day ( $5-4 = 1$ ) for 15 days on the 16<sup>th</sup> day be climbs over the top.

## Activity

- **Objective:-** To find out prime factors of any given number
- **Material: -** Marbles

### Procedure:-

- Teacher divides the class into two groups.
- Both the groups are provided with same number of marbles. First the teacher gives 18 marbles each to both the groups.
- Teacher asks students to divide those marbles in groups entailing same number of marbles.
- First group divides the marbles in two groups of nine each second group divides the marbles in 3 groups of six each.
- Teacher again asks them to divide further.
- Both the groups find the factors of 18  $2 \times 3 \times 3$  at last.
- If in the same manner teacher given any prime number then they are not able to find factors. Then the teacher explains that factors of such number are one and the number itself like 17.

**Activity:-** Alternative method of multiplication and division.

**Objective:-** To drill and practice

### Procedure: -

1. Teacher asks students to take two numbers. Suppose they take 3 and 4. Teacher tells them that  $3 \times 4$  means adding 3, 4 times like  $3 \times 4 = 3 + 3 + 3 + 3 = 12$
2. Like will division of 12 by 3 mean subtracting 3 from twelve till remainder obtained is '0' or it is less than the divisor. The number of times the process is being done is the quotient.

$$12/3 = 12 - 3 = 9; 9 - 3 = 6; 6 - 3 = 3; 3 - 3 = 0$$

Total 4 times the process is being done so the answer is 4

3. Teacher asks to divide 5 by 0 to get the answer infinite.
4. When students seem able to do the job then teacher explains the process

$$5-0 = 5; 5 - 0 = 5; 5 - 0 = 5 \dots\dots\dots$$

We stop the process when we get 0 but here is this case if Subtraction is carried on for infinite times then also we can not get 0. Therefore the answer is 0.

5. In the same way,

Teacher asks to divide 0 by 5 to get the answer '0'

6. When students been unable to do the job then teacher explains the process.

He explains that here the dividend is already gesso so the process is not required even for single time. That is why the answer is zero.

**Activity:** Alternative method to find LCH

**Objective::** - So find LCH using alternative method

**Procedure:** -

1. Teacher gives instructions
- Take two distinct numbers. For example 8 and 12
- Subtract smaller number from greatest number
- Divide the answer by smaller number
- Write the answer which in the form of fractional number
- Take denominator from this fractional number and multiply it with greater number.

The answer so obtained is the L.C.M. of given two members.

**Activity:-** Alternative method to find HCF

**Objective:-** So find HCF using alternative method

**Procedure:** -

Teacher gives instructions: -

- Take two distinct numbers. For example 12 and 18
- Divide greater number by smaller number
- If remainders are obtained then divide smaller number by remainder. If again remainder is obtained then
- Do the same process until the remainder is not obtained
- If remainder is not obtained then the smaller number of the two distinct numbers is the HCF of the two numbers.

THE SCORES OBTAINED BY THE LEARNERS IN THE PRE TEST AND POST TEST ARE AS UNDER:

SHRI R.S. KALARIYA PRIMARY SCHOOL, JUNAGADH

| <i>NO.</i> | <i>STUDENT'S NAME</i> | <i>PRE TEST<br/>MARKS</i> | <i>POST TEST<br/>MARKS</i> | <i>I.Q. LEVEL</i> |
|------------|-----------------------|---------------------------|----------------------------|-------------------|
| 1          | TRIVEDI HAMINI        | 35                        | 40                         | Average           |
| 2          | DOBARIYA PANKTI       | 38                        | 41                         | Average           |
| 3          | BANUGARIYA MEGHA      | 24                        | 32                         | Below Average     |
| 4          | LADANI RAJ            | 47                        | 49                         | Above Average     |
| 5          | MENDAPARA VIHAR       | 46                        | 48                         | Above Average     |
| 6          | CHAPLA MANSI          | 20                        | 28                         | Below Average     |
| 7          | BHESDADIYA MANAN      | 45                        | 46                         | Above Average     |
| 8          | KARIYA VATSAL         | 33                        | 40                         | Average           |
| 9          | BHUVA KRISHNA         | 22                        | 28                         | Below Average     |
| 10         | SUREJA VITHTHESH      | 38                        | 42                         | Above Average     |
| 11         | MARADIYA JEET         | 20                        | 26                         | Below Average     |
| 12         | KAKKAD DEEP           | 41                        | 45                         | Above Average     |
| 13         | BHATT YESHA           | 46                        | 47                         | Above Average     |
| 14         | VAKHARIYA JUMANA      | 19                        | 27                         | Below Average     |
| 15         | TRAMBADIYA YASH       | 48                        | 50                         | Above Average     |
| 16         | ZANZRUKIYA HARSH      | 44                        | 46                         | Above Average     |
| 17         | JADEJA NARENDRA       | 42                        | 43                         | Above Average     |
| 18         | HIRPARA MILEE         | 40                        | 44                         | Average           |
| 19         | MEHTA KRUTI           | 34                        | 38                         | Average           |
| 20         | KALARIYA JIGAR        | 29                        | 35                         | Average           |
| 21         | TRAMBADIYA PRINCE     | 45                        | 47                         | Above Average     |
| 22         | MARVANIYA<br>BHARGAV  | 46                        | 48                         | Above Average     |
| 23         | GOPANI RAVI           | 38                        | 42                         | Average           |
| 24         | TILVE JINAL           | 48                        | 51                         | Above Average     |
| 25         | PAMPANIYA DARSHAN     | 25                        | 30                         | Average           |

|    |                        |    |    |               |
|----|------------------------|----|----|---------------|
| 26 | KANTESARIYA<br>BHARGAV | 25 | 31 | Average       |
| 27 | DHADAKIYA VED          | 19 | 24 | Below Average |
| 28 | VASANI MILAN           | 19 | 25 | Below Average |
| 29 | VIRAMGAMA RUTVI        | 31 | 37 | Average       |
| 30 | RAVALIYA DEVEN         | 37 | 41 | Average       |
| 31 | KALARIYA VATSAL        | 47 | 48 | Above Average |
| 32 | TRAMBADIYA TEJAS       | 40 | 43 | Average       |
| 33 | SHINIJIYA DIKSHITA     | 22 | 25 | Below Average |
| 34 | MENPARA HIMA           | 43 | 46 | Above Average |
| 35 | JAMBUDIYA MANSI        | 41 | 44 | Above Average |
| 36 | KELAIYA MANSI          | 30 | 37 | Average       |
| 37 | DAVE AMI               | 42 | 46 | Above Average |
| 38 | HIRANI PARTH           | 26 | 29 | Average       |
| 39 | MODI PRIYAL            | 23 | 30 | Below Average |
| 40 | BATHANI SHYAM          | 18 | 24 | Below Average |
| 41 | KANERIYA MARGI         | 18 | 26 | Below Average |
| 42 | GONDALIYA TEJAS        | 29 | 34 | Average       |
| 43 | BALDANIYA KARAN        | 31 | 36 | Average       |
| 44 | PATEL KISHAN           | 22 | 28 | Below Average |
| 45 | DANGAR MITAL           | 47 | 48 | Above Average |
| 46 | KINJAL                 | 20 | 28 | Below Average |
| 47 | HINSU RIDHDHI          | 16 | 24 | Below Average |
| 48 | BHARAI PRASHANT        | 48 | 53 | Above Average |
| 49 | RAITHTHA HARDIK        | 47 | 50 | Below Average |
| 50 | CHAVDA HIRAL           | 20 | 26 | Average       |
| 51 | PAREKH PUJA            | 8  | 20 | Below         |
| 52 | PARAMAR KARAN          | 25 | 31 | Average       |

RAMESHWAR VIDHYA MANDIR, MAJEVADI

| NO. | STUDENT'S NAME        | PRE TEST MARKS | POST TEST MARKS | I.Q. LEVEL    |
|-----|-----------------------|----------------|-----------------|---------------|
| 1   | GOHEL HARDIK          | 29             | 33              | Average       |
| 2   | PONKIYA RASHMIT       | 17             | 23              | Below Average |
| 3   | GAJERA AAKASH         | 13             | 21              | Below Average |
| 4   | HIRANI NEELAM         | 19             | 25              | Below Average |
| 5   | KARELIYA NEHA         | 16             | 24              | Below Average |
| 6   | GAJERA SHIVANG        | 15             | 24              | Below Average |
| 7   | DESAI HARDIK          | 17             | 26              | Below Average |
| 8   | PABANI KISHAN         | 27             | 34              | Average       |
| 9   | THUMMAR SAGAR         | 18             | 27              | Below Average |
| 10  | PABANI SAGAR          | 29             | 36              | Average       |
| 11  | JODHANI CHIRAG        | 15             | 25              | Below Average |
| 12  | MAKWANA RAVI          | 18             | 28              | Below Average |
| 13  | PONKIYA ALKA          | 44             | 46              | Above Average |
| 14  | PUCHCHADIYA<br>KOMAL  | 47             | 48              | Above Average |
| 15  | JODHANI NAMRATA       | 42             | 47              | Above Average |
| 16  | GARACHH NIYATI        | 34             | 39              | Average       |
| 17  | PONKIYA KINJAL        | 33             | 39              | Average       |
| 18  | SIDHPARA NOUKA        | 41             | 43              | Above Average |
| 19  | SUREJA KISHAN         | 40             | 44              | Above Average |
| 20  | THUMMAR DIKSHIT       | 32             | 38              | Average       |
| 21  | VAGADIYA KEVAL        | 34             | 42              | Average       |
| 22  | GAJERA AJAY           | 38             | 42              | Above Average |
| 23  | VAGADIYA BANSI        | 39             | 42              | Above Average |
| 24  | DHOLARIYA<br>JAYDEEP  | 26             | 33              | Average       |
| 25  | PONKIYA PIYUSH        | 20             | 27              | Below Average |
| 26  | PICHCHADIYA<br>VARSHA | 27             | 34              | Average       |



|    |                     |    |    |               |
|----|---------------------|----|----|---------------|
| 27 | MATHURIA<br>JAYDEEP | 28 | 34 | Average       |
| 28 | PONKIYA<br>KEYUR    | 28 | 35 | Average       |
| 29 | DHOLARIA<br>BHAVYTA | 27 | 26 | Average       |
| 30 | VEKARIYA<br>ENDIYA  | 20 | 26 | Below Average |
| 31 | MAKWAN<br>TRUPTI    | 30 | 34 | Average       |
| 32 | RAYJADA<br>VIPUL    | 33 | 38 | Average       |
| 33 | VANVI<br>HNIKA      | 32 | 37 | Average       |
| 34 | SOJITRA<br>VEBHAV   | 30 | 37 | Average       |
| 35 | VASOLIYA<br>PARTH   | 44 | 48 | Above Average |
| 36 | THOLARIYA<br>RONAK  | 26 | 31 | Average       |
| 37 | RUDANI<br>VIBHA     | 18 | 25 | Below Average |
| 38 | RAYJADA<br>TRUPTI   | 19 | 27 | Below Average |
| 39 | SOJITRA<br>SHREYASH | 19 | 24 | Below Average |
| 40 | JODHANI<br>RAHUL    | 28 | 32 | Average       |
| 41 | PONKIYA<br>NESH     | 20 | 27 | Below Average |
| 42 | JODHANI<br>SANDIP   | 29 | 35 | Average       |
| 43 | VADGAMA<br>SABBIR   | 32 | 38 | Average       |