ICSE Class 8 Maths Selina Solutions Chapter 5: The focus of the Class 8 Maths Chapter "Playing with Number" is numbers, which adds to the chapter's intrigue. In the field of mathematics, one can simply play with numbers and quickly find many relationships and analogies between them using the number line.

If a number can be stated as the total of the product of its digits with their corresponding place values, it is said to be in a generalised form. For example, 90 = 10 x 9 = 0, 56 = 10 x 5 + 6, 37 = 10 x 3 + 7. The divisibility test rules for a two- or three-digit integer stated in the general form are also explained in this chapter.

ICSE Class 8 Maths Selina Solutions Chapter 5 Overview

Chapter 5 of the ICSE Class 8 Maths Selina Solutions, titled "Playing with Numbers," explores various fundamental concepts related to numbers. It delves into different types of numbers such as prime numbers, composite numbers, even and odd numbers, and factors and multiples.

The chapter provides a clear understanding of how to identify and differentiate between these types of numbers through definitions, examples, and exercises. Students learn to determine factors and multiples of given numbers, understand divisibility rules, and solve problems involving prime factorization. This foundational knowledge is crucial for building a strong base in mathematics, laying the groundwork for more complex topics in subsequent grades.

ICSE Class 8 Maths Selina Solutions Chapter 5

Here we have provided ICSE Class 8 Maths Selina Solutions Chapter 5 for the ease of students so that they can prepare better for their upcoming exams -

(i) 11

Solution:

We know that

Sum of 73 and 37 is to be divided by

Consider ab = 73

and ba = 37

a=7 and b=3

The quotient of ab+bc i.e. (73+37)when

Now divided by 11 is a+b=7+3=10

(ab+ba11=a+b)

(ii) 10

Solution:

We know that

Sum of 73 and 37 is to be divided by

Consider ab=73

and ba=37

a=7 and b=3

The quotient of ab+ba i.e. (73 + 37) when

Now divided by 10 (i.e. a + b is 11) ,

(ab+baa+b=11)

Question 2.Write the quotient when the sum of 94 and 49 is divided by

(i) 11

Solution:

We know that

Sum of 94 and 49 is to be divided by

Consider ab=94

and ba=49

a=9 and b=4

The quotient of 94+49 (i.e. ab + ba)

Now divided by

11 is a+b i.e. 9 + 4 = 13

(ab+ba11=a+b)

(ii) 13

Solution:

We know that

Sum of 94 and 49 is to be divided by

Consider ab = 94

and ba = 49

a = 9 and b = 4

The quotient of 94+49 (i.e. ab+ba)

Now divided by 13 i.e. (a+b) is 11

($ab+baa+b=11$)

Question 3. Find the quotient when 73 – 37 is divided by

(i) 9

Solution:

(i) We know that

Difference of 73 – 37 is to be divided by 9

Consider ab=73 and ba=37

a=7 and b=3

The quotient of 73-37(i.e. ab-ba) when

When divided by 9 is a-b i.e. 7-3=4

($ab-ba9=a-b$)

(ii) 4

Solution:

Consider ab=73 and ba=37

(a=7 and b=3)

The quotient of 73-37 (i.e. ab – ba) when

Now divided by 4 i.e. (a-b) is 9

($\frac{ab-ba}{a-b}$=9)

Question 4.

Find the quotient when 94-49 is divided by

(i) 9

Solution:

We know that

Difference of 94 and 49 is to be divided by

ab = 94 and ba = 49

a = 9 and b = 4

The quotient of 94 – 49 i.e. (ab – ba) when

Now divided by 9 is (a-b) i.e. 9 – 4 = 5

($\frac{ab-ba}{9}$=$a-b$)

(ii) 5

Solution:

The quotient of 94-49 i.e. (ab-ba) when

Now divided by 5 i.e. (a-b) is 9

($\frac{ab-ba}{a-b}$=9)

Question 5. Show that 527 + 752 + 275 is exactly divisible by 14.

Solution:

abc = 100a+106+c……(i)

bca = 1006+10c+a…….(ii)

cab = 100c+10a+b…….(iii)

By adding,(i),(II) and (iii),

we get abc + bca + cab = 111a + 111c + 111c = 111(a + b + c) = 3 x 37 (a + b + c)

Let us try this method on

527 + 752 + 275 to check is it exactly divisible by 14

Here, a = 5, b = 2,c = 7

527+752+275=3×37(5+2+7)=3×37×14

Therefore, it shown that 527 + 752 + 275 is exactly divisible by 14.

Question 6. If a = 6, show that abc = bac.

Solution:

Given: a = 6

To show: abc = bac

Proof: abc = 100a + 106 + c……(i)

(By using property 3)

Bac = 1006 + 10a + c…..(ii)

(By using property 3)

Here a = 6

Now substitute the value of a=6 in equation (i) and (ii), we get

abc = 1006 + 106 + c…. (iii)

bac = 1006 + 106 + c…..(iv)

By subtracting (iv) from (iii) abc – bac=0

abc = bac

Therefore, proved.

Question 7. If a>c; show that abc – cba = 99 (a – c).

Solution:

Given: a>c

To show: abc – cba = 99 (a – c)

Proof: abc = 100a + 10b + c….(i)

(By using property 3)

cba = 100c + 10b + a…..(ii)

(By using property 3)

By subtracting, equation (ii) from (i), we get

abc – cba = 100a + c – 100c – a

abc – cba = 99a – 99c

abc – cba = 99(a – c)

Therefore, it is proved.

Question 8. If c>a; show that cba – abc = 99(c – a).

Solution:

Given: c>a

To show: cba – abc = 99 (c – a)

Proof:

cba = 100c + 106 + a…..(i)

(By using property 3)

abc = 100a + 106 + a….(ii)

(By using property 3)

cba-abc=100c+106+a-100a-106-c

cba-abc=99c-99a

cba-abc=99(c-a)

Therefore, it is proved.

Question 9. If a = c, show that cba – abc = 0

Solution:

Given: a=c

To show : cba – abc = 0

Proof:

cba = 100c + 106 + a….(i)

(By using property 3)

Here, a = c,

Now substitute the value of a = c in equation (i) and (ii)

cba =100c +10b + c…..(iii)

abc = 100c + 10b +c…..(iv)

By subtracting (iv) from (iii)

cba-abc-100c+106+c-100c-106-c

cba-abc = 0

cba = abc

Therefore, it is proved

Question 10. Show that 954 – 459 is exactly divisible by 99.

Solution:

To show: 954 – 459 is exactly divisible by 399, where a = 9, b = 5, c = 4

abc = 100a + 10b + c

954=100×9+10×5+4

954=900+50+4…… (i)

459=100×4+10×5+9

459=400+50+9…… (ii)

Now subtract both the equations

954 – 459 = 900 + 50 + 4 – 400 – 50 – 9

By further calculation

954 – 459 = 500 – 5

954 – 459 = 495

We get

954 – 459 = 99 x 5

954 – 459 is exactly divisible by 99

Therefore, it is proved.

ICSE Class 8 Maths Selina Solutions Chapter 5 Ex 5B

Here we have provided ICSE Class 8 Maths Selina Solutions Chapter 5 Ex 5B for the ease of students so that they can prepare better for their upcoming exams -

Question 1.

$$\begin{array}{r} 3\,A \\ +\,2\,5 \\ \hline B\,2 \end{array}$$

Solution:

A=7 as 7+5=12. We want 2 at units place

and 1 is carry over.

Now 3+2+1=6

B=6

Therefore, A=7 and B=6

$$\begin{array}{r} 3\,7 \\ +\,2\,5 \\ \hline 6\,2 \end{array}$$

Question: 2

```
  98
 +4A
-----
 CB3
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Solution:

A=5 as 8+5=13. We want 3 at units place

and 1 is carry over.

Now 9+4+1=14.

B=4 and C=1

Therefore, A=5 and B=4 and C=1

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  98
 +45
-----
 143
```

Question: 3

```
  A1
 +1B
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  B0
```

Solution:

B=9 as 9+1=10. We want 0 at units place

and 1 is carry over.

Now B-1-1=A.

A=9-2=7

Therefore, A=7 and B=9

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  71
 +19
-----
  90
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Question: 4

$$\begin{array}{r} 2AB \\ +AB1 \\ \hline B18 \end{array}$$

Solution:

B=7 as 7+1=8. We want 8 at unit place.

Now

7+A=11

A=11-7=4

Therefore, A=4 and B=7

$$\begin{array}{r} 247 \\ +\ 471 \\ \hline 718 \end{array}$$

Question: 5

$$\begin{array}{r} 12A \\ +6AB \\ \hline A09 \end{array}$$

Solution:

A+B=9

and 2+A=10

A=10-2=8

8+B=9

B=9-8=1

Therefore, A=8 and B=1

$$\begin{array}{r} 128 \\ +\,681 \\ \hline 809 \end{array}$$

Benefits of ICSE Class 8 Maths Selina Solutions Chapter 5

Chapter 5 of ICSE Class 8 Maths Selina Solutions, "Playing with Numbers," offers several benefits to students:

Conceptual Clarity: It helps students understand the fundamental concepts of numbers such as prime numbers, composite numbers, even and odd numbers, factors, and multiples. This clarity aids in building a strong foundation for advanced topics in mathematics.

Problem-Solving Skills: By solving exercises and problems related to factors, multiples, and divisibility rules, students enhance their problem-solving abilities. They learn to apply different mathematical concepts to solve real-world and theoretical problems.

Logical Thinking: The chapter encourages logical thinking as students learn to analyze numbers based on their properties and relationships. They develop reasoning skills by identifying patterns and relationships among numbers.

Preparation for Exams: Selina Solutions provide comprehensive explanations and step-by-step solutions to textbook exercises. This helps students prepare effectively for exams by understanding the types of questions that may be asked and how to approach them.

Practical Application: Understanding the properties of numbers and their classifications (prime, composite, even, odd) enables students to apply this knowledge in everyday scenarios and other areas of mathematics.

Builds Confidence: Mastering the concepts in this chapter boosts students' confidence in handling mathematical problems, laying a solid groundwork for future learning in higher classes.