

**RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1:** The Physics Wallah academic team has produced a comprehensive answer for Chapter 5: Playing with Numbers in the RS Aggarwal class 8 textbook. The RS Aggarwal class 8 solution for chapter 5 Playing with Numbers Exercise-5A is uploaded for reference only; do not copy the solutions.

Before going through the solution of chapter 5 Playing with Numbers Exercise-5A, one must have a clear understanding of Chapter 5 Playing with Numbers. Read the theory of Chapter 5 Playing with Numbers and then try to solve all numerical of exercise-5A. For class 8 maths students, the NCERT textbook is a highly recommended resource for solving numerical problems and referencing NCERT solutions.

## **RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1 Playing with Numbers Overview**

RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1, titled "Playing with Numbers," introduces students to fascinating concepts about numbers and their properties. Exercise 5.1 focuses on enhancing students' understanding of divisibility rules and the factors and multiples of numbers.

The exercise includes various problems that require students to apply divisibility tests for numbers 2, 3, 4, 5, 6, 8, 9, 10, and 11. By practicing these rules, students learn how to quickly determine if a number is divisible by another, which is an essential skill for simplifying fractions, finding factors, and solving problems involving large numbers.

The exercise also delves into concepts such as the highest common factor (HCF) and the least common multiple (LCM). Students are encouraged to solve problems by applying these concepts, which are fundamental for understanding the relationships between numbers.

The RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1 challenges students with a variety of problems, ranging from simple calculations to more complex word problems, enhancing their problem-solving abilities and critical thinking skills.

## **RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1(Ex 5A)**

Below we have provided RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1 Playing with Numbers-

**Question (1) The units digit of a two-digit number is 3 and seven times the sum of the digits is the number itself. Find the number.**

Solution: Let the digit be  $x$ . Then, the units place digit = 3

$$\therefore \text{Number} = (10x + 3)$$

$$\therefore 7(x+3) = (10x + 3)$$

$$\Rightarrow 7x + 21 = 10x + 3$$

$$\Rightarrow 10x + 3 = 7x + 21$$

$$\Rightarrow 10x - 7x = 21 - 3$$

$$\Rightarrow 3x = 18$$

$$\Rightarrow x = 6$$

Therefore the number is  $\{(10 \times 6) + 3\} = 63$ .

**Question (2) In a two-digit number, the digit at the units place is double the digit in the tens place. The number exceeds the sum of its digits by 18. Find the number.**

Solution: Let the tens digit be  $x$ . The unit place digit =  $2x$ .

$$\therefore \text{Number} = 10x + 2x$$

$$\therefore (x + 2x) + 18 = (10x + 2x)$$

$$\Rightarrow 3x + 18 = 12x$$

$$\Rightarrow 12x = 3x + 18$$

$$\Rightarrow 12x - 3x = 18$$

$$\Rightarrow 9x = 18$$

$$\Rightarrow x = 2$$

Therefore, the number  $\{(10 \times 2) + (2 \times 2)\} = 24$ .

**Question (3) A two-digit number is 3 more than 4 times the sum of its digits. If 18 is added to the number, its digits are reversed. Find the number.**

Solution: Let the tens digit be  $a$ . The unit place digit =  $b$ .

$$\therefore \text{Number} = (10a + b)$$

$$\therefore 4(a + b) + 3 = (10a + b)$$

$$\Rightarrow 4a + 4b + 3 = 10a + b$$

$$\Rightarrow 10a + b - 4a - 4b = 3$$

$$\Rightarrow 6a - 3b = 3$$

$$\Rightarrow 3(2a - b) = 3$$

$$\Rightarrow 2a - b = 1 \dots\dots\dots(i)$$

Given, 18 is added to the number, its digit are reversed.

$$\therefore \text{Number} = (10b + a)$$

$$(10a + b) + 18 = (10b + a)$$

$$\Rightarrow 10a + b - 10b - a = -18$$

$$\Rightarrow 9a - 9b = -18$$

$$\Rightarrow 9(a - b) = -18$$

$$\Rightarrow a - b = -2 \dots\dots\dots(ii)$$

Subtract (i) – (ii)

$$2a - b = 1$$

$$a - b = -2$$

$$\begin{array}{r} - \quad + \quad + \\ a \quad = 3 \end{array}$$

Using  $a = 3$  in equation (i)

$$\therefore (2 \times 3) - b = 1$$

$$\Rightarrow 6 - b = 1$$

$$\Rightarrow b = 6 - 1$$

$$\Rightarrow b = 5$$

Therefore, the number =  $\{(10 \times 3) + 5\} = 35$ .

**Question (4) The sum of the digits of a two-digit number is 15. The number obtained by interchanging its digits is 63. What is the difference between the digits of the number?**

Solution: Let the tens and unit digits of the required number be  $a$  and  $b$  respectively. Then,

$$a + b = 15 \dots\dots\dots(i)$$

$$\text{Original number} = 10a + b$$

$$\text{Number obtained by interchanging its digits} = 10b + a.$$

$$\therefore (10a + b) + 9 = (10b + a)$$

$$\Rightarrow 10a + b + 9 = 10b + a$$

$$\Rightarrow 10a + b - 10b - a = -9$$

$$\Rightarrow 9a - 9b = -9$$

$$\Rightarrow 9(a - b) = -9$$

$$\Rightarrow a - b = -1 \dots\dots\dots(ii)$$

Adding the equation (i) and (ii)

$$a + b = 15$$

$$\begin{array}{r} a - b = -1 \\ 2a \quad \quad = 14 \end{array}$$

$$\Rightarrow a = 7$$

Using  $a = 7$  in equation (i)

$$a + b = 15$$

$$\Rightarrow 7 + b = 15$$

$$\Rightarrow b = 15 - 7$$

$$\Rightarrow b = 8$$

Therefore, the number =  $\{(10 \times 7) + 8\} = 78$ .

**Question (5) The difference between a 2-digit number and the number obtained by interchanging its digit is 63. What is the difference between the digits of the number?**

Solution: Let the tens and unit digits of the number be  $a$  and  $b$  respectively. Then,

$$\therefore \text{Number} = 10a + b$$

$$\text{The number obtained by interchanging its digits} = (10b + a)$$

$$\therefore (10a + b) - (10b + a) = 63$$

$$\Rightarrow 10a + b - 10b - a = 63$$

$$\Rightarrow 9a - 9b = 63$$

$$\Rightarrow 9(a - b) = 63$$

$$\Rightarrow a - b = 7$$

Therefore, the different between the digits is 7.

**Question (6) In a 3-digit number, the tens digit is thrice the units digit and the hundreds digit is four times the units digit. Also, the sum of its digits is 16. Find the number.**

Solution: Let the unit place digit be  $x$ . Then, the tens place digit =  $3x$  and the hundred place digit =  $4x$ .

$$\therefore 4x + 3x + x = 16$$

$$\Rightarrow 8x = 16$$

$$\Rightarrow x = 2$$

Therefore, Unit place digit = 2. The tens place digit =  $(3 \times 2) = 6$ . The hundreds place digit =  $(4 \times 2) = 8$ .

Hence, the number is 862.

## Benefits fo RS Aggarwal Solutions for Class 8 Maths

### Chapter 5 Exercise 5.1

The RS Aggarwal Solutions for Class 8 Maths Chapter 5 Exercise 5.1, "Playing with Numbers," offers numerous benefits that aid students in mastering mathematical concepts related to numbers. Here are some key benefits:

#### 1. Comprehensive Understanding of Divisibility:

The solutions provide detailed explanations of divisibility rules for various numbers, helping students quickly identify divisibility without long division.

Students learn efficient methods to check divisibility, enhancing their calculation speed and accuracy.

#### 2. Strong Foundation in Factors and Multiples:

The exercise reinforces the understanding of factors and multiples, which are fundamental concepts in mathematics.

Students gain insights into identifying common factors and multiples, crucial for simplifying fractions and solving algebraic problems.

### **3. Enhancement of Problem-Solving Skills:**

The solutions include a variety of problems, ranging from simple to complex, encouraging students to apply their knowledge practically.

Step-by-step solutions help students understand the logical approach needed to tackle mathematical problems effectively.

### **4. Preparation for Advanced Topics:**

By mastering the basics of number theory, students are better prepared for more advanced topics in mathematics, such as algebra and number theory.

The exercise lays a solid foundation for understanding concepts like the highest common factor (HCF) and the least common multiple (LCM).