RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1: Here we provided the RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1 which focuses on operations with algebraic expressions.

By working through these solutions students can gain a clearer understanding of how to handle algebraic expressions and perform these fundamental operations effectively. These solutions are designed to help students build a strong foundation in algebra and improve their problem-solving skills, which will be beneficial for their overall mathematical proficiency.

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1 Overview

Chapter 6 of RS Aggarwal's Class 8 Maths book deals with **Operations on Algebraic Expressions**. This chapter introduces students to various mathematical operations involving algebraic expressions, which are combinations of numbers, variables, and operators. The focus is on performing fundamental operations such as addition, subtraction, multiplication, and division of algebraic expressions.

In this chapter, students learn to simplify expressions by combining like terms, expand expressions using distributive properties, and factorize algebraic expressions. They also tackle problems involving complex expressions with brackets and multiple terms, applying the BODMAS rule (Brackets, Orders, Division and Multiplication, Addition, and Subtraction) for accurate solutions.

Through exercises in this chapter, students develop skills to handle expressions with different variables and powers, manage algebraic operations involving multiple terms, and solve real-life problems. This foundational knowledge is important for understanding more advanced algebraic concepts and enhancing problem-solving abilities.

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1 PDF

The PDF link for RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1 is available below. This PDF provides detailed solutions and step-by-step guidance for the exercise, which focuses on operations with algebraic expressions.

By reviewing these solutions, students can improve their problem-solving skills, clarify doubts, and gain a stronger grasp of algebraic concepts.

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Operations on Algebraic Expressions (Exercise 6A) Exercise 6.1

The RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1 are available below. This resource provides detailed solutions and explanations for problems related to operations on algebraic expressions.

Add:

(Question 1) 8ab, – 5ab, 3ab, – ab

Solution:

= 8ab + (- 5ab) + 3ab + (- ab)

= 8ab – 5ab + 3ab – ab

= 11ab – 6ab = 5ab

(Question 2) 7x, – 3x, 5x, – x, – 2x

Solution:

= 7x + (- 3x) + 5x + (- x) + (- 2x)

= 7x – 3x + 5x – x – 2x

= 12x – 6x = 6x

(Question 3) 3a – 4b + 4c, 2a + 3b – 8c, a – 6b + c

Solution:

= 3a – 4b + 4c + 2a + 3b – 8c + a – 6b + c

= 6a – 7b – 3c

(Question 4) 5x – 8y + 2z, 3z – 4y – 2x, 6y – z – x and 3x – 2z – 3y

Solution:

= 5x – 8y + 2z + 3z – 4y – 2x + 6y – z – x + 3x – 2z – 3y

= 5x – 9y + 2z

(Question 5) $6ax - 2by + 3cz$, $6by - 11ax - cz$ and $10cz - 2ax - 3by$

Solution:

$= 6ax - 2by + 3cz + 6by - 11ax - cz + 10cz - 2ax - 3by$

$= -7ax + by + 12cz$

(Question 6) $2x^3 - 9x^2 + 8$, $3x^2 - 6x - 5$, $7x^3 - 10x + 1$ and $3 + 2x - 5x^2 - 4x^3$

Solution:

$= 2x^3 - 9x^2 + 8 + 3x^2 - 6x - 5 + 7x^3 - 10x + 1 + 3 + 2x - 5x^2 - 4x^3$

$= 5x^3 - 11x^2 - 14x + 12$

(Question 7) $6p + 4q - r + 3$, $2r - 5p - 6$, $11q - 7p + 2r - 1$ and $2q - 3r + 4$

Solution:

$= 6p + 4q - r + 3 + 2r - 5p - 6 + 11q - 7p + 2r - 1 + 2q - 3r + 4$

$= -6p + 17q$

(Question 8) $4x^2 - 7xy + 4y^2 - 3$, $5 + 6y^2 - 8xy + x^2$ and $6 - 2xy + 2x^2 - 5y^2$.

Solution:

$= 4x^2 - 7xy + 4y^2 - 3 + 5 + 6y^2 - 8xy + x^2 + 6 - 2xy + 2x^2 - 5y^2$

$= 7x^2 - 17xy + 5y^2 + 8$

Subtract:

(Question 9) $3a^2b$ from $-5a^2b$

Solution:

$= -5a^2b - 3a^2b$

$= -8a^2b$

(Question 10) $-8pq$ from $6pq$

Solution:

$= 6pq - (-8pq)$

= 6pq + 8pq

= 14pq

(Question 11) – 2abc from – 8abc

Solution:

= – 8abc – (- 2abc)

= – 8abc + 2abc

= – 6abc

(Question 12) – 16p from – 11p

Solution:

= -11p – (- 16p)

= – 11p + 16p

= 5p

(Question 13) 2a – 5b + 2c – 9 from 3a – 4b – c + 6

Solution:

= 3a – 4b – c + 6 – (2a – 5b + 2c – 9)

= 3a – 4b – c + 6 – 2a + 5b – 2c + 9

= a + b – 3c + 15

(Question 14) – 6p + q + 3r + 8 from p – 2q – 5r – 8

Solution:

= p – 2q – 5r – 8 – (- 6p + q + 3r + 8)

= p – 2q – 5r – 8 + 6p – q – 3r – 8

= 7p – 3q – 8r – 16

(Question 15) $x^3 + 3x^2 – 5x + 4$ from $3x^3 – x^2 + 2x – 4$

Solution:

$= 3x^3 – x^2 + 2x – 4 – (x^3 + 3x^2 – 5x + 4)$

$= 3x^3 – x^2 + 2x – 4 – x^3 – 3x^2 + 5x – 4$

$= 2x^3 – 4x^2 + 7x – 8$

(Question 16) $5y^4 – 3y^3 + 2y^2 + y – 1$ from $4y^4 – 2y^3 – 6y^2 – y + 5$

Solution:

$= 4y^4 – 2y^3 – 6y^2 – y + 5 – (5y^4 – 3y^3 + 2y^2 + y – 1)$

$= 4y^4 – 2y^3 – 6y^2 – y + 5 – 5y^4 + 3y^3 – 2y^2 – y + 1$

$= – y^4 + y^3 – 8y^2 – 2y + 6$

(Question 17) $4p^2 + 5q^2 – 6r^2 + 7$ from $3p^2 – 4q^2 – 5r^2 – 6$

Solution:

$= 3p^2 – 4q^2 – 5r^2 – 6 – (4p^2 + 5q^2 – 6r^2 + 7)$

$= 3p^2 – 4q^2 – 5r^2 – 6 – 4p^2 – 5q^2 + 6r^2 – 7$

$= – p^2 – 9q^2 + r^2 – 13$

(Question 18) What must be subtracted from $3a^2 – 6ab – 3b^2 – 1$ to get $4a^2 – 7ab – 4b^2 + 1$?

Solution: $3a^2 – 6ab – 3b^2 – 1 – 4a^2 + 7ab + 4b^2 – 1$

$= – a^2 + ab + b^2 – 2$

(Question 19) The two adjacent sides of a rectangle are $5x^2 – 3y^2$ and $x^2 + 2xy$. Find the perimeter.

Solution: Perimeter of the rectangle $= 2 [(5x^2 – 3y^2) + (x^2 + 2xy)]$

$= 2 (5x^2 – 3y^2 + x^2 + 2xy)$

$= 2 (6x^2 – 3y^2 + 2xy)$

$= 12x^2 – 6y^2 + 4xy$

(Question 20) The perimeter of a triangle is $6p^2 – 4p + 9$ and two of its sides are $p^2 – 2p + 1$ and $3p^2 – 5p + 3$. Find the third side of a triangle.

Solution: $6p^2 – 4p + 9 – [(p^2 – 2p + 1) + (3p^2 – 5p + 3)]$

$= 6p^2 – 4p + 9 – (p^2 – 2p + 1 + 3p^2 – 5p + 3)$

$= 6p^2 – 4p + 9 – (4p^2 – 7p + 4)$

$= 6p^2 – 4p + 9 – 4p^2 + 7p – 4$

$= 2p^2 + 3p + 5$

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.1

- **Clear Explanations:** The solutions provide step-by-step explanations making it easier for students to understand the processes involved in solving algebraic expressions.
- **Practice Opportunities:** By working through the exercise students can practice simplifying and operations on algebraic expressions, which reinforces their learning and builds confidence.
- **Conceptual Clarity:** The solutions help clarify complex concepts related to algebraic operations, ensuring students grasp the foundational principles effectively.
- **Error Correction:** Detailed solutions highlight common mistakes and provide correct methodologies, helping students learn from errors and improve their problem-solving skills.
- **Time Efficiency:** With structured solutions students can quickly identify the correct approach to solving problems, saving time and improving exam preparation.