RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2: RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 have been prepared by subject experts of Physics Wallah. These solutions provide comprehensive, step-by-step explanations for solving complex algebraic expressions.

With detailed guidance students can learn to manage multiplication and division of algebraic terms, as well as handle expressions involving brackets with confidence. The expert insights ensure that students grasp the concepts effectively, improving their problem-solving skills and reinforcing their understanding of algebraic operations.

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 Overview

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 provide a detailed overview of operations involving algebraic expressions with brackets. In this exercise, students work on expanding and simplifying expressions where algebraic terms are enclosed within parentheses. The problems are designed to enhance students skills in applying the distributive property, combining like terms, and managing complex algebraic structures.

Through this exercise students learn to handle multi-step problems and perform operations such as multiplication and division on algebraic expressions. The solutions provide clear, step-by-step explanations to help students understand how to approach and solve these types of problems. This exercise is important for developing a solid foundation in algebra preparing students for more advanced topics in mathematics.

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 PDF

The PDF link for RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 is available below. By referring to this PDF students can gain a clearer understanding of how to simplify and expand algebraic expressions, reinforcing their skills in this area. This will help improve their problem-solving abilities and overall performance in mathematics.

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 PDF

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

RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2 are available below. This resource provides detailed solutions and explanations for problems related to operations on algebraic expressions.

Find each the following products:

(1) (5x + 7) × (3x + 4)

= (5x × 3x) + (7 × 3x) + (5x × 4) + (7 × 4)

= $15x^2$ + 21x + 20x + 28

= $15x^2$ + 41x + 28

(2) (4x + 9) × (x – 6)

= (4x × x) + (9 × x) – (4x × 6) – (9 × 6)

= $4x^2$ + 9x – 24x – 54

= $4x^2$ – 15x – 54

(3) (2x + 5) × (4x – 3)

= (2x × 4x) + (5 × 4x) – (2x × 3) – (5 × 3)

= $8x^2$ + 20x – 6x – 15

= $8x^2$ + 14x – 15

(4) (3y – 8) × (2m – 3n)

= (3y × 2m) – (8 × 2m) – (3y × 3n) + (8 × 3n)

= 6ym – 16m – 9yn + 24n

(5) (7x + 2y) × (x + 4y)

= (7x × x) + (2y × x) + (7x × 4y) + (2y × 4y)

= $7x^2$ + 2xy + 28xy + $8y^2$

= $7x^2$ + 30xy + $8y^2$

(6) (9x + 5y) × (4x × 3y)

= (9x × 4x) + (5y × 4x) + (9x × 3y) + (5y × 3y)

$= 36x^2 + 20xy + 27xy + 15y^2$

(7) $(3m - 4n) \times (2m - 3n)$

$= (3m \times 2m) - (4n \times 2m) - (3m \times 3n) + (4n \times 3n)$

$= 6m^2 - 8mn - 9mn + 12n^2$

$= 6m^2 - 17mn + 12n^2$

(8) $(x^2 - a^2) \times (x - a)$

$= (x^2 \times x) - (a^2 \times x) - (x^2 \times a) + (a^2 \times a)$

$= x^3 + a^2x - ax^2 + a^3$

(9) $(x^2 - y^2) \times (x + 2y)$

$= (x^2 \times x) - (y^2 \times x) + (x^2 \times 2y) - (y^2 \times y)$

$= x^3 - xy^2 + 2x^2y - y^3$

(10) $(3p^2 + q^2) \times (2p^2 - 3q^2)$

$= (3p^2 \times 2p^2) + (q^2 \times 2p^2) - (3p^2 \times 3q^2) - (q^2 \times 3q^2)$

$= 6p^4 + 2p^2q^2 - 9p^2q^2 - 3q^4$

$= 6p^4 - 7p^2q^2 - 3q^4$

(11) $(2x^2 - 5y^2) \times (x^2 + 3y^2)$

$= (2x^2 \times x^2) - (5y^2 \times x^2) + (2x^2 \times 3y^2) - (5y^2 \times 3y^2)$

$= 2x^4 - 5x^2y^2 + 6x^2y^2 - 15y^4$

$= 2x^4 + x^2y^2 - 15y^4$

(12) $(x^3 - y^3) \times (x^2 + y^2)$

$= (x^3 \times x^2) - (y^3 \times x^2) + (x^3 \times y^2) - (y^3 \times y^2)$

$= x^5 - x^2y^3 + x^3y^2 - y^5$

(13) $(x^4 + y^4) \times (x^2 - y^2)$

$= (x^4 \times x^2) + (y^4 \times x^2) - (x^4 \times y^2) - (y^4 \times y^2)$

$= x^6 + x^2y^4 - x^4y^2 - y^6$

(14) $\left(x^4 + \frac{1}{x^4}\right) \times \left(x + \frac{1}{x}\right)$

$= \frac{x^8+1}{x^4} \times \frac{x^2+1}{x}$

$= \frac{(x^8 \times x^2)+x^2+x^8+1}{x^5}$

$= \frac{x^{10}+x^2+x^8+1}{x^5}$

$= \frac{x^{10}}{x^5} + \frac{x^2}{x^5} + \frac{x^8}{x^5} + \frac{1}{x^5}$

$= x^5 + x^3 + \frac{1}{x^3} + \frac{1}{x^5}$

Find each of the following products:

(15) $(x^2 - 3x + 7) \times (2x + 3)$

$= (x^2 \times 2x) - (3x \times 2x) + (7 \times 2x) + (x^2 \times 3) - (3x \times 3) + (7 \times 3)$

$= 2x^3 - 6x^2 + 14x + 3x^2 - 9x + 21$

$= 2x^3 - 3x^2 + 5x + 21$

(16) $(3x^2 + 5x - 9) \times (3x - 5)$

$= (3x^2 \times 3x) + (5x \times 3x) - (9 \times 3x) - (3x^2 \times 5) - (5x \times 5) + (9 \times 5)$

$= 9x^3 + 15x^2 - 27x - 15x^2 - 25x + 45$

$= 9x^3 - 52x + 45$

(17) $(x^2 - xy + y^2) \times (x + y)$

$= (x^2 \times x) - (xy \times x) + (y^2 \times x) + (x^2 \times y) - (xy \times y) + (y^2 \times y)$

$= x^3 – x^2y + y^2x + x^2y – xy^2 + y^3$

$= (x^3 + y^3)$

(18) $(x^2 + xy + y^2) \times (x – y)$

$= (x^2 \times x) + (xy \times x) + (y^2 \times x) – (x^2 \times y) – (xy \times y) – (y^2 \times y)$

$= x^3 + x^2y + xy^2 – x^2y – xy^2 – y^3$

$= (x^3 – y^3)$

(19) $(x^3 – 2x^2 + 5) \times (4x – 1)$

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

$= 4x^4 – 8x^3 + 20x – x^3 + 2x^2 – 5$

$= 4x^4 – 9x^3 + 2x^2 + 20x – 5$

(20) $(9x^2 – x + 15) \times (x^2 – 3)$

$= (9x^2 \times x^2) – (x \times x^2) + (15 \times x^2) – (9x^2 \times 3) + 3x – 45$

$= 9x^4 – x^3 + 15x^2 – 27x^2 + 3x – 45$

$= 9x^4 – x^3 – 12x^2 + 3x – 45$

(21) $(x^2 – 5x + 8) \times (x^2 + 2)$

$= (x^2 \times x^2) – (5x \times x^2) + 8x^2 + 2x^2 – 10x + 16$

$= x^4 – 5x^3 + 10x^2 – 10x + 16$

(22) $(x^3 – 5x^2 + 3x + 1) \times (x^2 – 3)$

$= (x^3 \times x^2) – (5x^2 \times x^2) + (3x \times x^2) + x^2 – 3x^3 + 15x^2 – 9x – 3$

$= x^5 – 5x^4 + 3x^3 + x^2 – 3x^3 + 15x^2 – 9x – 3$

$= x^5 – 5x^4 + 16x^2 – 9x – 3$

(23) $(3x + 2y – 4) \times (x – y + 2)$

$= 3x^2 + 2xy – 4x – 3xy – 2y^2 + 4y + 6x + 4y – 8$

$= 3x^2 – xy + 2x – 2y^2 + 8y – 8$

(24) $(x^2 – 5x + 8) \times (x^2 + 2x – 3)$

$= x^4 – 5x^3 + 8x^2 + 2x^3 – 10x^2 + 16x – 3x^2 + 15x – 24$

$= x^4 – 3x^3 – 5x^2 + 31x – 24$

(25) $(2x^2 + 3x – 7) \times (3x^2 – 5x + 4)$

$= 6x^4 + 9x^3 – 21x^2 – 10x^3 – 15x^2 + 35x + 8x^2 + 12x – 28$

$= 6x^4 – x^3 – 28x^2 + 47x – 28$

(26) $(9x^2 – x + 15) \times (x^2 – x – 1)$

$= 9x^4 – x^3 + 15x^2 – 9x^3 + x^2 – 15x – 9x^2 + x – 15$

$= 9x^4 – 10x^3 + 7x^2 – 14x – 15$

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 6 Exercise 6.2

- **In-Depth Understanding**: These solutions provide clear step-by-step explanations of algebraic operations, helping students grasp complex concepts such as simplifying and expanding expressions with brackets.
- **Enhanced Problem-Solving Skills**: By working through the detailed solutions students learn effective techniques for handling various algebraic expressions, which boosts their problem-solving skills and confidence.
- **Clarification of Doubts**: The solutions address common errors and misconceptions, allowing students to clear any doubts and gain a solid understanding of algebraic principles.
- **Improved Exam Preparation**: Practicing with these solutions helps students become familiar with the types of problems they may encounter in exams, leading to better preparation and performance.
- **Efficient Learning**: The structured approach of the solutions helps students learn efficiently, as they can follow logical steps to solve problems and reinforce their learning through practice.