RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1: The solutions for RS Aggarwal Class 8 Maths Chapter 7 Exercise 7.1 on factorization have been prepared by the experts of Physics Wallah. These solutions are designed to provide a clear and thorough understanding of factorization concepts.

The experts have broken down each problem step-by-step, ensuring that students can follow along and grasp the underlying principles of factorization with ease. This approach not only helps in solving the exercise problems efficiently but also enhances the student's overall comprehension of the topic.

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RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1 Overview

Exercise 7.1 in RS Aggarwal's Class 8 Maths Chapter 7 focuses on the foundational concepts of factorization. This exercise is designed to help students practice and understand how to factorize algebraic expressions systematically.

It covers various types of factorization techniques, including factoring out the greatest common factor and using algebraic identities. The problems in this exercise require students to apply these techniques to simplify and solve expressions, providing a solid base for more advanced topics. The exercise encourages students to develop their problem-solving skills and enhances their ability to work with algebraic expressions efficiently.

RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1 PDF

For those looking to access detailed solutions for RS Aggarwal's Class 8 Maths Chapter 7 Exercise 7.1 a PDF link is available below. This PDF provides an in-depth overview of the exercise, including step-by-step solutions and explanations prepared by experts.

By referring to this PDF students can enhance their understanding of factorization techniques and improve their problem-solving skills. The clear and structured format of the PDF ensures that students can easily follow along and effectively grasp the concepts covered in the exercise.

RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1 PDF

RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1 (Exercise 7A)

RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1 are available below. This resource provide detailed solutions and explanations for problems related to operations on algebraic expressions.

Factorise:

(Question 1) (i) 12x + 15

= [(3×4) x] + (3 × 5)

= 3(4x + 5)

(ii) 14m – 21

= 7 (2m – 3)

(iii) 9n – 12n²

= 3n (3 – 4n)

(Question 2) (i) 16a² – 24ab

= 8a (2a – 3b)

(ii) 15ab² – 20a²b

= 5ab (3b – 4a)

(iii) 12x²y³ – 21x³y²

= 3x²y² (4y – 7x)

(Question 3) (i) 24x³ – 36x²y

= 12x² (2x – 3y)

(ii) 10x³ – 15x²

= 5x² (2x – 3)

(iii) 36x³y – 60x²y³z

= 12x²y (3x – 5y²z)

(Question 4) (i) 9x³ – 6x² + 12x

= 3x (3x² – 2x + 4)

(ii) 8x² – 72xy + 12x

= 4x (2x – 18y + 3)

(iii) 18a³b³ – 27a²b³ + 36a³b²

= 9a²b² (2ab – 3b + 4a)

(Question 5) (i) 14x³ + 21x⁴y – 28x²y²

= 7x² (2x + 3x²y – 4y²)

(ii) – 5 – 10t + 20t²

= – 5 (1 + 2y – 4t²)

(Question 6) (i) x(x + 3) + 5(x + 3)

= (x + 3) (x + 5)

(ii) 5x(x – 4) – 7(x – 4)

= (x – 4) (5x – 7)

(iii) 2m(1 – n) + 3(1 – n)

= (1 – n) (2m + 3)

(Question 7) 6a(a – 2b) + 5b(a – 2b)

= (a – 2b) (6a + 5b)

(Question 8) x³(2a – b) + x² (2a – b)

= (2a – b) (x³ + x²)

= x² (2a – b) (x + 1)

(Question 9) 9a(3a – 5b) – 12a²(3a – 5b)

= (3a – 5b) [3a(3 – 4a)]

= 3a (3a – 5b) (3 – 4a)

(Question 10) (x + 5)² – 4(x + 5)

= (x + 5) [(x + 5) – 4]

= (x + 5) (x + 1)

(Question 11) 3(a − 2b)² − 5(a − 2b)

= (a − 2b) (3a − 6b − 5)

(Question 12) 2a + 6b − 3(a + 3b)²

= 2(a + 3b) − 3(a + 3b)²

= (a + 3b) (2 − 3a − 9b)

(Question 13) 16(2p − 3q)² − 4(2p − 3q)

= (2p − 3q) (32p − 48q − 4)

= 4 (2p − 3q) (8p − 12q − 1)

(Question 14) x(a − 3) + y(3 − a)

= x(a − 3) − y(a − 3)

= (a − 3) (x − y)

(Question 15) 12(2x − 3y)² − 16(3y − 2x)

= 12(2x − 3y)² + 16(2x − 3y)

= (2x − 3y) (24x − 36y + 16)

= 4 (2x − 3y) (6x − 9y + 4)

(Question 16) (x + y) (2x + 5) − (x + y) (x + 3)

= (x + y) [(2x + 5) − (x + 3)]

= (x + y) (2x + 5 − x − 3)

= (x + y) (x + 2)

(Question 17) ar + br + at + bt

= r (a + b) + t (a + b)

= (a + b) (r + t)

(Question 18) x² − ax − bx + ab

$= x (x - a) - b (x - a)$

$= (x - a) (x - b)$

(Question 19) $\underline{ab^2} - \underline{bc^2} - \underline{ab} + c^2$

$= b (ab - c^2) - 1(ab - c^2)$

$= (ab - c^2) (b - 1)$

(Question 20) $x^2 - xz + xy - yz$

$= x (x - z) + y (x - z)$

$= (x - z) (x + y)$

(Question 21) $6ab - b^2 + 12ac - 2bc$

$= b(6a - b) + 2c (6a - b)$

$= (6a - b) (b + 2c)$

(Question 22) $(x - 2y)^2 + 4x - 8y$

$= (x - 2y) (x - 2y) + 4(x - 2y)$

$= (x - 2y) (x - 2y + 4)$

(Question 23) $y^2 - xy(1 - x) - x^3$

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

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

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

(Question 24) $(ax + by)^2 + (bx - ay)^2$

$= [(ax)^2 + 2axby + (by)^2] + [(bx)^2 - 2bxay + (ay)^2]$

$= a^2x^2 + 2axby + b^2y^2 + b^2x^2 - 2axby + a^2y^2$

$= a^2x^2 + b^2x^2 + a^2y^2 + b^2y^2$

$= x^2(a^2 + b^2) + y^2 (a^2 + b^2)$

$= (a^2 + b^2) (x^2 + y^2)$

(Question 25) $ab^2 + (a - 1) b - 1$

$= ab^2 + ab - b - 1$

$= ab(b + 1) - 1(b + 1)$

$= (b + 1)(ab - 1)$

(Question 26) $x^3 - 3x^2 + x - 3$

$= x^2(x - 3) + 1(x - 3)$

$= (x - 3)(x^2 + 1)$

(Question 27) $ab(x^2 + y^2) - xy(a^2 + b^2)$

$= abx^2 + aby^2 - a^2xy - b^2xy$

$= abx^2 - a^2xy - b^2xy + aby^2$

$= ax(bx - ay) - by(bx - ay)$

$= (bx - ay)(ax - by)$

(Question 28) $x^2 - x(a + 2b) + 2ab$

$= x^2 - ax - 2bx + 2ab$

$= x(x - a) - 2b(x - a)$

$= (x - a)(x - 2b)$

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 7 Exercise 7.1

- **Clear Explanations**: The solutions provide a thorough step-by-step breakdown of factorization problems. Each step is explained in detail ensuring that students understand how to approach and solve different types of factorization questions. This clarity helps students follow along and learn the correct methods to apply in their own work.
- **Enhanced Understanding**: By working through these solutions students gain a deeper understanding of the underlying principles of factorization. The explanations cover various factorization techniques, including factoring out the greatest common factor and applying algebraic identities, which helps in solidifying students' grasp of the topic.
- **Strong Foundation**: Mastering factorization through these solutions provides a strong mathematical foundation that is essential for understanding more advanced topics in

algebra. A solid grasp of factorization prepares students for future coursework and exams.

- **Effective Review**: The solutions are presented in a structured format making it easy for students to review concepts and practice problems systematically. This organized approach allows students to quickly identify areas where they need more practice and focus their efforts accordingly.
- **Better Academic Performance**: With clear explanations, improved problem-solving abilities, and a solid foundation in factorization students are likely to see improvements in their overall academic performance in mathematics. The solutions help build confidence and proficiency, which can lead to better results in tests and exams.