**ICSE Class 8 Maths Selina Solutions Chapter 13:** ICSE Class 8 Maths Selina Solutions for Chapter 13, "Factorisation," explain how to break down algebraic expressions into simpler factors.

This chapter covers methods like finding common factors, grouping terms, and using special patterns such as difference of squares and perfect squares.

These solutions are helpful for students preparing for exams, as they offer practice and reinforce important skills needed for further studies in math.

# ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation Overview

ICSE Class 8 Maths Selina Solutions for Chapter 13, "Factorisation," are prepared by subject experts from Physics Wallah. These solutions provide clear explanations and detailed answers to all the problems in this chapter.

Factorisation involves breaking down algebraic expressions into simpler factors using various methods like common factors, grouping, and special patterns such as difference of squares.

The solutions are designed to help students understand each step of the factorisation process effectively.

# ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation PDF

The PDF link below provides ICSE Class 8 Maths Selina Solutions for Chapter 13, "Factorisation," prepared by Physics Wallah experts. It includes detailed explanations and answers to all problems, covering methods like common factors and special patterns.

This resource is important for students preparing for exams to practice and master factorisation concepts effectively.

**ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation PDF**

# Factorisation

Factorisation is a fundamental process in algebra where we break down algebraic expressions into simpler factors. This simplification helps in solving equations, understanding relationships between variables, and making calculations more manageable. Here's a detailed explanation with examples of common factorisation methods:

**Finding Common Factors**:

- **Example**: Factorise 6x+9y6x + 9y6x+9y.
- **Solution**: First, identify the common factor. In this case, it's 3. 6x+9y=3(2x+3y)6x + 9y = 3(2x + 3y)6x+9y=3(2x+3y)

**Grouping Terms**:

- **Example**: Factorise ax+ay+bx+byax + ay + bx + byax+ay+bx+by.
- **Solution**: Group the terms with common factors together. ax+ay+bx+by=a(x+y)+b(x+y)=(a+b)(x+y)ax + ay + bx + by = a(x + y) + b(x + y) = (a + b)(x + y)ax+ay+bx+by=a(x+y)+b(x+y)=(a+b)(x+y)

**Difference of Squares**:

- **Example**: Factorise x2−9x^2 - 9x2−9.
- **Solution**: Recognize it as a difference of squares and apply the formula. x2−9=(x−3)(x+3)x^2 - 9 = (x - 3)(x + 3)x2−9=(x−3)(x+3)

**Perfect Square Trinomials**:

- **Example**: Factorise x2+6x+9x^2 + 6x + 9x2+6x+9.
- **Solution**: Check if it can be written as a perfect square. x2+6x+9=(x+3)2x^2 + 6x + 9 = (x + 3)^2x2+6x+9=(x+3)2

**Factoring by Grouping**:

- **Example**: Factorise ax2+bx+ay+byax^2 + bx + ay + byax2+bx+ay+by.
- **Solution**: Group terms and find common factors within each group. ax2+bx+ay+by=a(x2+y)+b(x+y)=(ax+b)(x+y)ax^2 + bx + ay + by = a(x^2 + y) + b(x + y) = (ax + b)(x + y)ax2+bx+ay+by=a(x2+y)+b(x+y)=(ax+b)(x+y)

Understanding these factorisation methods is important as they form the basis for solving quadratic equations, simplifying complex expressions, and exploring mathematical relationships in various fields of study.

# ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation

Below we have provided ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation for the ease of the students –

## ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation Exercise 1

**Question 1**

**$15x + 5$**

**Solution:-**

Simplifying we get $15x + 5 = 5(3x+1)$

**Question 2**

**$a^3 - a^2 + a$**

**Solution:-**

Simplifying we get $a^3 - a^2 + a = a(a^2 - a + 1)$

**Question 3**

**$3x^2 + 6x^3$**

**Solution:**

Simplifying we get $3x^2 + 6x^3 = 3x^2(1+2x)$

**Question 4**

**$4a^2 - 8ab$**

**Solution**

$4a^2 - 8ab = 4a(a-2b)$

**Question 5**

**$2x^3b^2 - 4x^5b^4$**

**Solution:-**

Simplifying we get $2x^3b^2 - 4x^5b^4 = 2x^3b^2(1-2x^2b^2)$

**Question 6**

**$15x^4y^3 - 20x^3y$**

**Solution:-**

$15x^4y^3 - 20x^3y = 5x^3y(3xy^2 - 4)$

**Question 7.**

**$a^3b - a^2b^2 - b^3$**

**Solution:-**

Simplifying we get $a^3b - a^2b^2 - b^3 = b(a^3 - a^2b - b^2)$

**Question 8.**

**$6x^2y + 9xy^2 + 4y^3$**

**Solution:-**

Simplifying we get $6x^2y + 9xy^2 + 4y^3 = y(6x^2 + 9xy + 4y^2)$

**Question 9**

**$17a^6b^8 - 34a^4b^6 + 51a^2b^4$**

**Solution:-**

$17a^6b^8 - 34a^4b^6 + 51a^2b^4$

Simplifying we get $17a^2b^4(a^4b^4 - 2a^2b^2 + 3)$

**Question 10**

$3x^5y - 27x^4y^2 + 12x^3y^3$

**Solution:-**

Simplifying we get

$3x^5y - 27x^4y^2 + 12x^3y^3 = 3x^3y(x^2 - 9xy + 4y^2)$

**Question 11.**

$x^2(a - b) - y^2(a - b) + z^2(a - b)$

**Solution:-**

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

**Question 12.**

$(x + y)(a + b) + (x - y)(a + b)$

**Solution:-**

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

$= 2x(a+b)$

**Question 13**

$2b(2a + b) – 3c(2a + b)$

**Solution:-**

$2b(2a + b) – 3c(2a + b) = (2a + b)(2b – 3c)$

**Question 14.**

$12abc - 6a^2b^2c^2 + 3a^3b^3c^3$

**Solution:-**

$12abc - 6a^2b^2c^2 + 3a^3b^3c^3 = 3abc(4 - 2abc + a^2b^2c^2)$

**Question 15.**

$4x(3x – 2y) – 2y(3x – 2y)$

**Solution:-**

$4x(3x – 2y) – 2y(3x – 2y) = (3x – 2y)(4x – 2y)$

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

$=2(3x – 2y)(2x – y)$

# Benefits of ICSE Class 8 Maths Selina Solutions Chapter 13 Factorisation

- **Clear Understanding**: The solutions provide clear explanations and step-by-step methods to factorise algebraic expressions, helping students grasp the concept effectively.
- **Enhanced Problem-Solving Skills**: Practice with factorisation problems improves students ability to simplify expressions, solve equations, and manipulate algebraic terms efficiently.
- **Preparation for Exams**: By mastering factorisation techniques, students are better prepared for exams where factorisation is a key component of questions, ensuring they can tackle such problems confidently.

- **Foundation for Advanced Mathematics**: Understanding factorisation lays a strong foundation for higher-level maths topics like quadratic equations, polynomial functions, and algebraic manipulation in later grades.