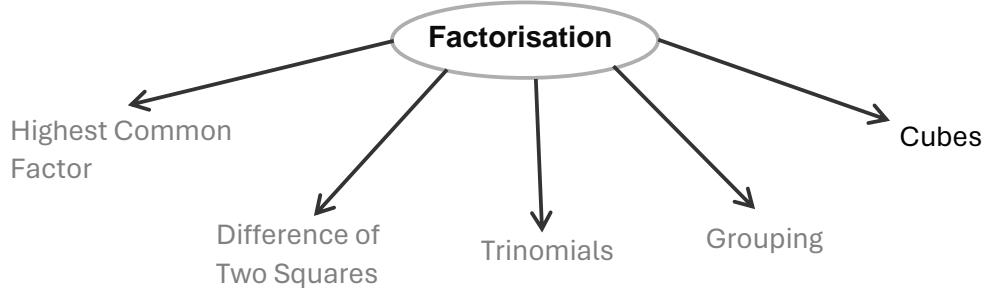




Grade 10

Workbook



Taking out a common factor

1. $6a^3 - 8a^2$

2. $2xy^2 + x$

3. $2x(x - 5) - 3(x - 5)$

4. $2x(x - 5) - 3(5 - x)$

Difference of squares

1. $x^2 - 4$

2. $25p^2 - 64q^2$

3. $16x^8 - 1$

4. $(x + y)^2 - 16$

5. $\frac{1}{16}x^6 - \frac{1}{4}y^4$

6. $2 - 50(x + 1)^2$



Trinomial Factorisation

1. $x^2 + 3x + 2$

2. $y^2 - 2y - 8$

3. $2x + 15 - x^2$

4. $x^2 - 8xy + 15y^2$

5. $2y^2 - 5y + 3$

6. $6x^2 - 23x - 18$

7. $(x + 1)^2 + 2(x + 1) + 1$

Grouping

1. $5x + 5y - ty - tx$

2. $4x^3 - 3x^2 - 16x + 12$



3. $a - b + ab - 1$

4. $x^2 - 4y^2 + x - 2y$

5. $x^2(p - q) - 2x(p - q) - q + p$

Cubes

1. $y^3 - 8$

2. $y^{12} - 1$

3. $16x^6 + 54y^3$

Mixed examples

Hints: Always look for a common factor first. Make sure that the expression is factorised fully.

1. $10a^{20} - 40$

2. $a^8 - 1$

3. $x^2 + 3x - 10$

4. $\frac{64}{9} - y^2$



5. $3y^2 + 12y - 63$

6. $7x - 4 + x^2 - 2x - 2$

7. $(a - 2b)^3 - 4(a - 2b)$

8. $2x(a + x) - 2y(a + x) - 2a - 2x$

9. $4x^2 + 20x + 25$

10. Use factorisation to calculate $28^2 - 8^2$. Do not use a calculator and show all steps.

11. If $(2x - 1)$ is a factor of $8x^2 + kx - 3$, determine the value of k