

Algebra – Expansion and Factorisation

1. Expand: $3(2x - 5)$.

- A. $6x - 15$.
- B. $6x + 5$.
- C. $6x + 15$.
- D. $6x - 5$.

2. How do we combine like terms?

- A. By multiplying their coefficients.
- B. By dividing their coefficients.
- C. By adding or subtracting their coefficients.
- D. By raising their coefficients to a power.

3. How can we factorize an algebraic expression?

- A. By adding or subtracting its terms.
- B. By breaking it down into its prime factors.
- C. By multiplying it with another expression.
- D. By dividing it by another expression.

4. Factorize: $10xy + 15x$.

- A. $10x(2y - 3)$.
- B. $5x(2y + 3)$.
- C. $5x(2y - 3)$.
- D. $10x(2y + 3)$.

5. How do we expand double brackets?

- A. By multiplying each term from the first bracket by each term from the second bracket.
- B. By adding each term from the first bracket to each term from the second bracket.
- C. By subtracting each term from the first bracket from each term from the second bracket.
- D. By dividing each term from the first bracket by each term from the second bracket.

6. Expand: $(3x + 5)(2x + 1)$.

- A. $6x^2 + 13x + 5$.
- B. $6x^2 + 13x - 5$.
- C. $6x^2 - 13x - 5$.
- D. $6x^2 - 13x + 5$.

7. Factorize: $9a^2 - 4b^2$.

- A. $(3a - 2b)(3a + 2b)$.
- B. $(3a + 2b)(3a - 2b)$.
- C. $(3a + 2b)(3a + 2b)$.
- D. $(3a - 2b)(3a - 2b)$.

8. How can we factorize a number?

- A. By multiplying it with another number.
- B. By dividing it by another number.
- C. By breaking it down into its prime factors.
- D. By adding or subtracting its terms.

9. Simplify: $2(3x - 4) - 5(2x - 1)$.

- A. $6x - 8 - 10x + 5 = -4x - 3$.
- B. $6x - 8 + 10x - 5 = 16x - 13$.
- C. $6x - 8 - 10x - 5 = -4x - 13$.
- D. $6x - 8 + 10x + 5 = 16x - 3$.

10. What is the difference between simplification and evaluation?

- A. Simplification involves reducing an expression to its simplest form, while evaluation involves substituting specific values for variables and calculating the result.
- B. Simplification involves expanding an expression, while evaluation involves simplifying it.
- C. Simplification involves dividing an expression, while evaluation involves multiplying it.
- D. Simplification involves finding the value of an expression, while evaluation involves finding its factors.

11. What is factorization?

- A. The process of finding the value of an algebraic expression.
- B. The process of expanding brackets.
- C. The process of simplifying an algebraic expression.
- D. The process of expressing an algebraic expression or number as a product of its factors.

12. What is expansion of brackets?

- A. The process of subtracting each term inside the brackets from the term outside the brackets.
- B. The process of dividing each term inside the brackets by the term outside the brackets.
- C. The process of adding each term inside the brackets to the term outside the brackets.
- D. The process of multiplying each term inside the brackets by the term outside the brackets.

13. What is the difference between factorization and expanding brackets?

- A. Factorization involves breaking down an expression into its factors, while expanding brackets involves multiplying out an expression that is written in parentheses.
- B. Factorization involves simplifying an expression, while expanding brackets involves making it more complex.
- C. Factorization involves finding the value of an expression, while expanding brackets involves finding its factors.
- D. Factorization involves dividing an expression, while expanding brackets involves multiplying it.

14. Factorize: $4x^2 + 4xy$.

- A. $4x^2 - 4xy$.
- B. $4x(x - y)$.
- C. $4x^2 + 4xy$.
- D. $4x(x + y)$.

15. What is the distributive property?

- A. The property that states that for any numbers or variables a , b , and c , $a(b - c) = ab + ac$.
- B. The property that states that for any numbers or variables a , b , and c , $a(b + c) = ab - ac$.
- C. The property that states that for any numbers or variables a , b , and c , $a(b - c) = ab - ac$.
- D. The property that states that for any numbers or variables a , b , and c , $a(b + c) = ab + ac$.

16. What is simplification?

- A. The process of breaking down an algebraic expression into its factors.
- B. The process of finding the value of an algebraic expression.
- C. The process of expanding an algebraic expression.
- D. The process of reducing an algebraic expression or equation to its simplest form by combining like terms.

17. Simplify: $4x - 6 - 2x + 3 - 5x$.

- A. $-3x + 9$.
- B. $-3x + 3$.
- C. $-3x - 9$.
- D. $-3x - 3$.