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. $(3a - 2b)(3a - 2b)$.

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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. $4x(x + y)$.

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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. $-3x - 3$.

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