Types of Algebraic Expression

A. Choose the correct answer:

1. Which of the following is a binomial expression?

a) $7x$ b) $x + 3$

c) $x^2 + 2x + 1$ d) 4

2. A trinomial has how many terms?

a) 1 b) 2

c) 3 d) 4

3. Which of these is a monomial?

a) $x + y$ b) $5a$

c) $x^2 + 3x + 1$ d) $a - b$

4. An algebraic expression having more than three unlike terms is called:

a) Binomial b) Monomial

c) Polynomial d) Trinomial

5. In the expression $2x^2 + 3x + 7$, the number of terms is:

a) 1 b) 2

c) 3 d) 4

B. Write the Missing Terms to Complete the Sentences:

1. An expression with only one term is called a _____.
2. A polynomial with two terms is known as a _____.
3. The expression $x^2 + 2x + 1$ is an example of a _____.
4. An expression having three terms is a _____.
5. _____ expressions are made up of constants and variables connected by operations.

C. Mark each sentence with a True (✔) or False (✗):

1. An expression with four terms is always called a binomial. _____

2. The expression 7x is a monomial. _____
3. All monomials are also polynomials. _____
4. A trinomial has exactly three like terms. _____
5. Algebraic expressions can include both variables and constants. _____

D. Figure out the answers to these questions:

1. Identify the number of terms in the expression: $4x^2 + 5x - 3 + 7y$.
2. Create a trinomial expression using only variable 'a'.
3. Write whether the expression $\frac{3x}{5} + 2y$ is a binomial or not.
4. From the expression $5xy + 3x - 7$, list all terms and state their types (constant, linear, etc.).
5. Rearrange and classify the expression: $2x + 5 - x^2 + 3x$ into standard form and identify its type.

E. Challenge yourself with these questions:

1. Form a binomial where one term is 2x and the other is a constant.
2. Write a polynomial with at least 4 different types of terms.
3. How would you identify if an expression is a monomial just by looking at it?
4. Create a short word problem involving a trinomial expression and ask the student to write the expression.
5. Take the expression $x^2 + 2x + 1$. Ask students to verify whether it is a perfect square trinomial.