Quiz 1.3: Factoring Trinomials

Multiple Choice: *Choose the letter that corresponds to the correct answer. Write the answer in your answer sheet.*

1. A rational algebraic expression is in the simplest form if the numerator and the denominator are:
   A. Both Zero B. Relatively Prime C. Equal to One D. Common Multiples
2. What does it mean to factor a polynomial completely?
   A. To rearrange the terms of the polynomial.
   B. To simplify the polynomial to its lowest terms.
   C. To expand the polynomial using the distributive property.
   D. To write the polynomial as a product of irreducible factors.
3. What is a rational algebraic expression?
   A. A fraction whose denominator is equal to zero. C. An expression that is equal to zero.
   B. A ratio of two polynomials. D. An expression that is simplified to its lowest terms.
4. Which property states that if the product of two factors is zero, then one or both factors must be zero?
   A. Factoring Property B. Product Property C. Zero Factors Property D. Zero Product Property
5. The expression $\frac{P}{Q}$, where P and Q are polynomials and $Q \neq 0$, is called:
   A. General Trinomial C. Simplified Expression
   B. Rational Algebraic Expression D. Trinomial with 1 as Leading Coefficient
6. For all real numbers a and b, if $ab = 0$, then $a = 0$ or $b = 0$ or both a and $b = 0$. This is stated in:
   A. Factoring Property B. Product Property C. Zero Factors Property D. Zero Product Property
7. When you multiply two binomial factors which are not identical, the result is a:
   A. Difference of Two Squares C. Perfect Square Trinomial
   B. General Trinomial D. Sum of Two Cubes
8. A rational algebraic expression becomes undefined if:
   A. The denominator equals one C. The numerator equals one
   B. The denominator equals zero D. The numerator equals zero
9. Find the values for the variable for which the expression $\frac{x}{2x+1}$ is undefined.
   A. $x = \frac{1}{2}$ B. $x = -\frac{1}{2}$ C. $x = 2$ D. $x = -2$
10. Simplify the rational algebraic expression $\frac{x^2+3x}{x+3}$.
    A. x B. $3x$ C. $x+2$ D. $x+3$
11. Give the domain of the expression $\frac{m}{m^2-25}$.
    A. $D = \{m|m = 5\}$ B. $D = \{m|m = -5\}$ C. $D = \{m|m \leq 5, -5\}$ D. $D = \{m|m \neq 5, -5\}$
12. The expression $\frac{5x+1}{4x^2-1}$ becomes undefined if x is equal to:
    A. $\frac{1}{2}$ B. $\frac{1}{3}$ C. $\frac{1}{4}$ D. $\frac{1}{5}$

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