

Fundamental Algebraic Concepts

Algebra · Practice Test · 12 Questions

1. Which term is used to describe a mathematical expression consisting of two terms connected by a plus or minus sign?

- A) Monomial
- B) Binomial
- C) Trinomial
- D) Polynomial

2. In the algebraic equation $5x + 3 = 18$, what is the value of x ?

- A) 2
- B) 4
- C) 3
- D) 5

3. Who is widely considered the 'father of algebra' for his 9th-century work 'Al-Kitab al-Mukhtasar fi Hisab al-Jabr wal-Muqabala'?

- A) Al-Khwarizmi
- B) Euclid
- C) Pythagoras
- D) Isaac Newton

4. What is the standard form of a quadratic equation?

- A) $ax + b = 0$
- B) $ax^2 + bx + c = 0$
- C) $y = mx + b$
- D) $a^2 + b^2 = c^2$

5. When multiplying two terms with the same base, such as $x^a * x^b$, what do you do with the exponents?

- A) Subtract them
- B) Divide them
- C) Add them
- D) Multiply them

6. What is the result of any non-zero number raised to the power of zero?

- A) The number itself
- B) Zero
- C) One
- D) Undefined

7. Which of the following is the correct representation of the slope-intercept form of a linear equation?

- A) $ax + by = c$
- B) $y = mx + b$
- C) $x = ay + b$
- D) $y - y_1 = m(x - x_1)$

8. In the expression $4x^3$, what is the '4' called?

- A) Exponent
- B) Variable
- C) Coefficient
- D) Base

9. Which property states that $a(b + c) = ab + ac$?

- A) Commutative Property
- B) Associative Property
- C) Distributive Property
- D) Identity Property

10. What is the square root of 144?

- A) 10
- B) 11
- C) 12
- D) 14

11. What do you call a letter or symbol used to represent an unknown value in an algebraic expression?

- A) Constant
- B) Coefficient
- C) Variable
- D) Exponent

12. If $a = 5$ and $b = 2$, what is the value of $a^2 - b^2$?

- A) 21
- B) 25
- C) 9
- D) 10