

Algebraic Origins and Fundamentals

Algebra · Practice Test · 15 Questions

1. In what century did the Persian mathematician Muhammad ibn Musa al-Khwarizmi write the book that introduced the term 'algebra' to the world?

- A) 7th century
- B) 9th century
- C) 11th century
- D) 13th century

2. What is the numerical value of a variable typically represented by the letter 'x' when the equation is $x + 5 = 10$?

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

3. The word 'algebra' originates from the Arabic word 'al-jabr', which appeared in the title of a book written in approximately what year?

- A) 820 AD
- B) 950 AD
- C) 1020 AD
- D) 1150 AD

4. In the standard algebraic expression $3x + 7$, what is the constant term?

- A) 3
- B) x
- C) 7
- D) 3x

5. How many sides does a shape have if its perimeter is calculated using the algebraic formula $P = 4s$?

- A) 3
- B) 4
- C) 5
- D) 6

6. Who is often referred to as the 'Father of Algebra' due to his 9th-century work?

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

7. In the equation $2y = 12$, what is the numerical value of y ?

- A) 4
- B) 6
- C) 8
- D) 10

8. What is the exponent value in the expression x^2 ?

- A) 0
- B) 1
- C) 2
- D) 3

9. Which number is known as the 'additive identity' in algebra, meaning adding it to any number leaves the number unchanged?

- A) -1
- B) 0
- C) 1
- D) 10

10. What is the value of 3 squared (3^2) in basic algebraic arithmetic?

- A) 6
- B) 8
- C) 9
- D) 12

11. If $5a = 20$, what is the value of 'a'?

- A) 3
- B) 4
- C) 5
- D) 15

12. Which century saw the first use of the plus (+) and minus (-) signs in published algebraic mathematics in Germany?

- A) 13th century
- B) 15th century
- C) 17th century
- D) 19th century

13. How many variables are present in the expression $2a + 3b$?

- A) 1
- B) 2
- C) 3
- D) 5

14. What is the result of $2x$ when $x = 0$?

- A) 0
- B) 1
- C) 2
- D) 20

15. In the expression $4x$, what is the name of the number '4'?

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