Foundations of Algebra

Mathematics · Practice Test · 12 Questions

1. In which century did the Persian mathematician Muhammad ibn Musa al-Khwarizmi write the influential book 'Al-Kitab al-Mukhtasar fi Hisab al-Jabr wa'l-Muqabala'?

A) 7th Century
B) 9th Century
C) 11th Century
D) 13th Century

2. What is the standard numerical value represented by the variable 'x' in the simplest algebraic equation x + 5 = 10?

A) 2
B) 3
C) 5
D) 15

3. The term 'Algebra' is derived from the Arabic word 'al-jabr', which appeared in a title written in approximately what year?

A) 820 AD
B) 1050 AD
C) 1215 AD
D) 1492 AD

4. In the algebraic expression 3x + 7, what is the specific number referred to as the 'coefficient'?

A) 3
B) 7
C) x
D) 10

5. What is the result of the algebraic expression 2y + 4 when y = 3?

A) 7
B) 9
C) 10
D) 12

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

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

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7. How many sides does a triangle have, a value often used to represent 'n' in basic geometry-based algebra problems?

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

8. In the equation 5z = 20, what is the value of z?

A) 4
B) 5
C) 15
D) 100

9. What is the value of the 'constant' in the expression 4a - 9?

A) 4
B) 9
C) -9
D) 1

10. How many variables are present in the expression 2x + 3y = 12?

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

11. Which number system, using 10 digits (0-9), serves as the base for standard algebraic notation?

A) Binary
B) Duodecimal
C) Decimal
D) Hexadecimal

12. In the expression 'x^2', what is the specific number called the exponent?

A) x
B) 2
C) 1
D) 0

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