

Historical Foundations of Algebra

History Of Algebra · Answer Key · 10 Questions

1. In which year was the treatise 'Al-Kitab al-mukhtasar fi hisab al-jabr wa'l-muqabala', which gave algebra its name, completed by Muhammad ibn Musa al-Khwarizmi?

- A) 780 AD
- B) 820 AD**
- C) 850 AD
- D) 875 AD

2. The Italian mathematician Gerolamo Cardano published his seminal work on the solution to cubic and quartic equations, 'Ars Magna', in which year?

- A) 1535
- B) 1540
- C) 1545**
- D) 1550

3. Who is the 17th-century French mathematician credited with introducing the modern algebraic notation of using letters from the beginning of the alphabet for knowns and the end for unknowns?

- A) Pierre de Fermat
- B) René Descartes**
- C) Blaise Pascal
- D) Marin Mersenne

4. The 'Abel-Ruffini theorem', stating that there is no general algebraic solution for polynomial equations of degree five or higher, was first proposed by Paolo Ruffini in what year?

- A) 1799**
- B) 1805
- C) 1812
- D) 1824

5. Which English mathematician, who lived from 1815 to 1864, is considered the founder of Boolean algebra, a fundamental component of modern computer architecture?

- A) Augustus De Morgan
- B) George Boole**
- C) Charles Babbage
- D) Ada Lovelace

6. Diophantus of Alexandria, often referred to as the 'father of algebra', wrote 'Arithmetica', a work that focused on solving indeterminate algebraic equations, likely between which years?

- A) 50-100 AD
- B) 150-250 AD**
- C) 300-350 AD
- D) 400-450 AD

7. Évariste Galois, whose work in group theory revolutionized algebraic understanding, died in a duel at the age of 20 in which year?

- A) 1828
- B) 1830
- C) 1832**
- D) 1834

8. In his 1591 work 'In Artem Analyticen Isagoge', which French mathematician was the first to use vowels and consonants to represent variables and coefficients?

- A) François Viète**
- B) Simon Stevin
- C) John Napier
- D) Johannes Kepler

9. The 'Fundamental Theorem of Algebra', which states that every non-constant single-variable polynomial with complex coefficients has at least one complex root, was first proved rigorously by whom in 1799?

- A) Leonhard Euler
- B) Carl Friedrich Gauss**
- C) Joseph-Louis Lagrange
- D) Jean le Rond d'Alembert

10. The first known use of the equals sign (=), created by Robert Recorde to represent two parallel lines of identical length, appeared in his 1557 textbook titled what?

- A) The Ground of Arts
- B) The Whetstone of Witte**
- C) The Pathway to Knowledge
- D) The Castle of Knowledge