

Historical Milestones in Mathematics

Mathematics · Answer Key · 20 Questions

1. Which ancient civilization is credited with the development of the base-60 sexagesimal system used for time and angles?

- A) Ancient Egyptians
- B) Sumerians (Babylonians)**
- C) Indus Valley Civilization
- D) Ancient Greeks

2. Who is historically recognized for authoring the 'Elements', a foundational treatise on geometry that influenced mathematics for centuries?

- A) Archimedes
- B) Pythagoras
- C) Euclid**
- D) Eratosthenes

3. In which century did Isaac Newton and Gottfried Wilhelm Leibniz independently develop the principles of calculus?

- A) 15th century
- B) 16th century
- C) 17th century**
- D) 18th century

4. The Rhind Mathematical Papyrus provides evidence of mathematical knowledge from which ancient civilization?

- A) Ancient Egypt**
- B) Ancient China
- C) The Mayan Empire
- D) The Roman Empire

5. Who was the first woman to be honored with a Fields Medal, the most prestigious award in mathematics, in 2014?

- A) Ada Lovelace
- B) Emmy Noether
- C) Maryam Mirzakhani**
- D) Sofia Kovalevskaya

6. Which Italian mathematician is famous for introducing the Hindu-Arabic numeral system to Europe in his book 'Liber Abaci'?

A) Leonardo Fibonacci

B) Luca Pacioli

C) Girolamo Cardano

D) Niccolò Fontana Tartaglia

7. The concept of 'zero' as a placeholder and a number was first formally defined in the 7th century by which Indian mathematician?

A) Aryabhata

B) Brahmagupta

C) Bhaskara I

D) Srinivasa Ramanujan

8. Which French mathematician is credited with inventing the coordinate system that connects algebra and geometry, now known as the Cartesian coordinate system?

A) Pierre de Fermat

B) Blaise Pascal

C) René Descartes

D) Joseph-Louis Lagrange

9. The 'Great Theorem' of Fermat, known as Fermat's Last Theorem, was finally proven in 1994 by which mathematician?

A) Andrew Wiles

B) Grigori Perelman

C) Terence Tao

D) John Nash

10. Which 19th-century mathematician is considered the 'father of computer science' for his design of the Analytical Engine?

A) Alan Turing

B) Charles Babbage

C) George Boole

D) Ada Lovelace

11. The 'Golden Ratio' (ϕ) is approximately equal to which value?

A) 2.718

B) 3.141

C) 1.618

D) 1.414

12. Which mathematician developed the 'Game of Life', a cellular automaton that models complex systems?

A) John von Neumann

B) John Horton Conway

C) Alan Turing

D) Claude Shannon

13. Who is known for the discovery of the 'Poincaré Conjecture', proving it in 2003 after it remained unsolved for nearly a century?

A) Grigori Perelman

B) Stephen Hawking

C) Roger Penrose

D) Edward Witten

14. What is the name of the mathematical constant approximately equal to 2.718, named after a Swiss mathematician?

A) Euler's number

B) Pi

C) Archimedes' constant

D) The Golden Ratio

15. Which ancient Greek mathematician successfully calculated the Earth's circumference using simple geometry and the angle of the sun?

A) Thales of Miletus

B) Hipparchus

C) Eratosthenes

D) Aristarchus

16. The 'Pascal's Triangle' was studied by mathematicians in China, India, and Persia centuries before Blaise Pascal; who was one of the first to document it in China?

A) Jia Xian

B) Zu Chongzhi

C) Liu Hui

D) Shen Kuo

17. Which Boolean algebraic logic system, fundamental to modern digital computing, is named after which British mathematician?

A) Charles Babbage

B) George Boole

C) Augustus De Morgan

D) Alan Turing

18. Srinivasa Ramanujan, a self-taught mathematical genius, made significant contributions to which field?

A) Number Theory

B) Fluid Dynamics

C) Quantum Mechanics

D) Graph Theory

19. The 'Four Color Theorem', which states that any map can be colored with four colors such that no adjacent regions share a color, was the first major theorem to be proven using what?

A) Human intuition

B) Computer assistance

C) Statistical sampling

D) Inductive logic

20. Which mathematician wrote 'A Mathematical Theory of Communication' in 1948, establishing the foundations of information theory?

A) Claude Shannon

B) Norbert Wiener

C) John von Neumann

D) Alan Turing