

Milestones in the History of Logic

Logic · Practice Test · 15 Questions

1. Which ancient Greek philosopher is credited with inventing the first formal system of syllogistic logic?

- A) Plato
- B) Aristotle
- C) Parmenides
- D) Zeno of Elea

2. Who authored the 'Begriffsschrift' (1879), which introduced the first formal system of predicate logic and quantifier notation?

- A) Gottlob Frege
- B) Bertrand Russell
- C) George Boole
- D) Giuseppe Peano

3. In 1854, who published 'An Investigation of the Laws of Thought', effectively creating the field of Boolean algebra?

- A) Augustus De Morgan
- B) Charles Sanders Peirce
- C) George Boole
- D) William Stanley Jevons

4. The 'Liar Paradox' is often attributed to which ancient philosopher of the Megarian school?

- A) Eubulides of Miletus
- B) Diodorus Cronus
- C) Stilpo
- D) Euclid of Megara

5. What is the name of the 1910-1913 three-volume work that attempted to derive all of mathematics from pure logic?

- A) Principia Ethica
- B) The Laws of Thought
- C) Grundgesetze der Arithmetik
- D) Principia Mathematica

6. Which logician proved the First Incompleteness Theorem in 1931, demonstrating that any consistent formal system capable of arithmetic contains unprovable statements?

- A) Alfred Tarski
- B) Kurt Gödel
- C) Alan Turing
- D) Alonzo Church

7. Who was the first to use the term 'logic' in the modern sense of 'the science of reasoning'?

- A) Zeno of Citium
- B) Alexander of Aphrodisias
- C) Chrysippus
- D) Cicero

8. The 'Law of Excluded Middle' (Tertium non datur) was first explicitly formulated as a principle of logic by whom?

- A) Aristotle
- B) Leibniz
- C) Kant
- D) Hegel

9. Which invention by Charles Sanders Peirce in the 1880s provided a graphical method for representing logical relations?

- A) Venn Diagrams
- B) Existential Graphs
- C) Truth Tables
- D) Karnaugh Maps

10. Who introduced the first systematic use of 'truth tables' in their 1921 work, 'Tractatus Logico-Philosophicus'?

- A) Ludwig Wittgenstein
- B) Emil Post
- C) Bertrand Russell
- D) Rudolf Carnap

11. The 'Sequent Calculus' (LK) was introduced in 1934 by which mathematician to simplify the study of logical proofs?

- A) Gerhard Gentzen
- B) David Hilbert
- C) Jacques Herbrand
- D) Kurt Gödel

12. Which philosopher is recognized for developing the first formal system of modal logic in the 20th century?

- A) C.I. Lewis
- B) Saul Kripke
- C) Ruth Barcan Marcus
- D) Arthur Prior

13. Who first proposed the concept of a 'universal characteristic' (characteristica universalis), a language that would reduce all logical reasoning to calculation?

- A) Thomas Hobbes
- B) Gottfried Wilhelm Leibniz
- C) René Descartes
- D) Blaise Pascal

14. The term 'propositional calculus' was popularized in English by which logician in his 1903 work 'The Principles of Mathematics'?

- A) Bertrand Russell
- B) Gottlob Frege
- C) Alfred North Whitehead
- D) Quine

15. In 1936, who independently proposed the 'lambda calculus' as a formal system for expressing computation and logical deduction?

- A) Alan Turing
- B) Alonzo Church
- C) John von Neumann
- D) Emil Post