

# Milestones in the History of Logic

Logic · Answer Key · 15 Questions

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**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