

## Questions on “Thinking Machines”

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1. In the history of science, many people thought of “thinking machines.” Discuss the contributions of the following people as to how their ideas of “mechanization of the thought processes” developed from the historical points of view.
  - (a) Gottfried Leibniz
  - (b) George Boole
  - (c) Alan Turing
  - (d) John McCarthy
  - (e) Allen Newell
2. The word “artificial intelligence” was coined in the 1956 Dartmouth College meeting. Who were main attendants of the meeting? What were the main topics discussed in the meeting?
3. Turing wrote a paper on artificial intelligence in 1950, which is 5 years before the 1956 AI meeting. What was main theme of this paper? What were main arguments of Turing in this paper? Why is this paper important?
4. Already the concept of AI was burgeoning in many disciplines and research areas. Describe briefly the related ideas in the following areas.
  - (a) Philosophy and logic
  - (b) Neurobiology
  - (c) Psychology and Cognitive Science
  - (d) Evolution
  - (e) Development
  - (f) Cybernetics and Control
  - (g) Statistics and Probability
  - (h) Computer
5. There is a long history of attempting to build human-like machines. Among them are AI, robotics, and cybernetics. How are they related? How are they different in their main focuses? What are their typical application areas?
6. What are the three laws of robotics? Why do you need them? What happens when the robot does abide by the laws?