Name _____

Pioneers of AI

Alan Turing (1912-1954)

Alan Turing was a British mathematician and logician often called the "father of computer science." During World War II, he worked at Bletchley Park, where he helped crack the German Enigma code. In 1950, he proposed the famous **Turing Test**, a way to measure whether a machine can show human-like intelligence by carrying on a conversation. Turing's ideas laid the foundation for modern computing and artificial intelligence.

John McCarthy (1927-2011)

John McCarthy was an American computer scientist who coined the term **"Artificial Intelligence"** in 1955. He was one of the main organizers of the 1956 Dartmouth Conference, often considered the birthplace of AI as a research field. McCarthy also developed the programming language **LISP**, which became widely used in AI research for decades.

Marvin Minsky (1927-2016)

Marvin Minsky was a cognitive scientist and AI researcher at MIT. He co-founded the **MIT Artificial Intelligence Laboratory** in 1959. Minsky worked on machine perception, problem-solving, and robotics. He was known for his optimism about AI's potential and wrote influential books, such as *The Society of Mind*, where he explained how human intelligence might arise from simple processes.

Herbert A. Simon (1916-2001)

Herbert Simon was a social scientist and computer scientist who, along with Allen Newell, created the **Logic Theorist** (1956), one of the first AI programs capable of solving mathematical proofs. Simon won the **Nobel Prize in Economics** in 1978 for his research on decision-making, showing how human reasoning could be modeled and simulated in machines.

Comprehension Questions

1. What was Alan Turing's contribution to AI, and what test did he create to evaluate machine intelligence?

2. Who coined the term "Artificial Intelligence," and what important programming language did he develop?

3. Which AI pioneer co-founded the MIT AI Laboratory, and what was the name of his influential book?

4. Who developed the Logic Theorist, and why is it considered important in AI history?

5. How did Herbert Simon's work connect AI to other fields outside computer science?

6. Which two pioneers mentioned were active around the mid-1950s, when AI research formally began?

7. Based on the readings, which pioneer do you think had the most lasting impact, and why? (short written response)