**Computing Machinery and Intelligence**

By: Alan Turing

Abridged by: Eric Rizzi

Essential questions:

1. How does Turing propose to measure intelligence?
2. Why does Turing use a test to determine intelligence, rather than some sort of definition?

**The Imitation Game**

I propose to consider the question, "Can machines think?" This should begin with definitions of the meaning of the terms "machine" and "think." The definitions might be framed so as to reflect so far as possible the normal use of the words, but this attitude is dangerous, If the meaning of the words "machine" and "think" are to be found by examining how they are commonly used it is difficult to escape the conclusion that the meaning and the answer to the question, "Can machines think?" is to be sought in a statistical survey such as a Gallup poll. But this is absurd. Instead of attempting such a definition I shall replace the question by another, which is closely related to it and is expressed in relatively unambiguous words.

The new form of the problem can be described in terms of a game which we call the "imitation game." [It is played with three participants, a human interrogator, a human answerer, and a machine answerer. The interrogator stays in a room apart from the other two. The object of the game for the interrogator is to determine which of the other two is the person and which is the machine.]

**Contrary Views on the Main Question**

It will simplify matters for the reader if I explain first my own beliefs in the matter. Consider first the more accurate form of the question. I believe that in about fifty years time it will be possible, to programme computers, with a storage capacity of about 10^9, to make them play the imitation game so well that an average interrogator will not have more than 70 per cent chance of making the right identification after five minutes of questioning. The original question, "Can machines think?" I believe to be too meaningless to deserve discussion. Nevertheless, I believe that at the end of the century the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted…