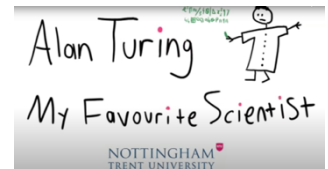


## AFTER WATCHING THE VIDEO:

VIDEO on Alan TURING <https://youtu.be/u3Ue7r5Xsyo>



I've chosen my favourite scientist as being Alan Turing and he is one of the most famous mathematicians that have ever lived that have made substantial impact on three main areas of science OK, and that's largely computer science and computational biology and he is also well-known for potentially saving many lives in World War II by cracking the German Enigma codes.

His main war contribution was at Bletchley Park being able to decipher the German Enigma Codes which the German Navy were using to transmit plans of their operations and within a few weeks of joining Bletchley Park Turing was able to modify a machine that could decipher these Enigma codes very quickly therefore help to counter their... the German movements and potentially save thousands of lives bringing the war to a quicker conclusion.

What appeals to me really relates to the work that he did as an undergraduate. He developed a mathematical formalism for general computation so being able to compute a function. This was the beginning of if you like...Computer Science as a discipline, as we know it and the notion of computation. Alan Turing is, you know, the founder of Computer Science because he is the one who developed if you like that initial idea about what an algorithm is and what we define an algorithm for.

Another thing that Alan Turing is incredibly famous for, particularly in the area of Artificial Intelligence, is that very notion of how do we know when a machine is behaving intelligently? What Turing did was to develop the Turing Test. Basically the Turing Test states if a human interrogator cannot determine whether the subject, through dialogue, is a computer or a person then, whatever it is it must be intelligent.

## Structured synthesis as required for CCINP ORAL EXAM:

### 1. Biography and Key Achievements

The speaker presents Alan Turing as one of the most famous mathematicians in history. The audio explains that he made major contributions to three main areas of science: computer science, computational biology, and wartime codebreaking. It also highlights that he is particularly known for potentially saving many lives during World War II by cracking the German Enigma codes.

### 2. Contribution to World War II

The audio explains that Turing worked at Bletchley Park, where he deciphered the German Enigma codes used by the German Navy to transmit operational plans. The speaker notes that within a few weeks of joining, Turing modified a machine to decode these messages rapidly, helping counter German military movements, potentially saving thousands of lives and shortening the war.

### 3. Contributions to Science and Artificial Intelligence

The speaker presents Turing's undergraduate work, explaining that he developed a mathematical formalism for general computation, which laid the foundation for computer science and the concept of algorithms. The audio also explains his impact on artificial intelligence through the creation of the Turing Test, which assesses whether a machine can exhibit intelligent behavior indistinguishable from that of a human.

## WHAT YOU NEED TO MEMORISE

ALAN TURING	<p><b>Famous mathematician</b></p> <ul style="list-style-type: none"> <li>- In computer science: made it possible to computer a function, created the idea of algorithms</li> <li>- Worked on computational biology</li> <li>- Saved many lives in WW2 by cracking the German Enigma code</li> <li>- Created the Turing test which states whether a computer is intelligent or not.</li> </ul>
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