Alan Turing was a remarkable British hero who helped create the modern world. Now known as the father of computer science, his inventions contributed greatly to the [groundwork](https://dict.hjenglish.com/w/groundwork" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) for the modern computer.

Born on June 23rd, 1912, in Maida Vale, Alan Turing grew up in Hastings. He displayed great individuality from a young age. At 14, he went to Sherborne School in Dorset. On discovering that there would be a general strike on his first day he took it upon himself to cycle the 60 or so miles to school on his own.

Turing [subsequently](https://dict.hjenglish.com/w/subsequently" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) read mathematics at Cambridge, later assisting in the development of the innovative Manchester computers.

On 4 September 1939 the day after Britain declared war on Germany, Turing reported to Bletchley Park, the wartime station of the Government Code and Cypher School and forerunner of GCHQ. At Bletchley, Turing led a team whose [ingenuity](https://dict.hjenglish.com/w/ingenuity" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) and intellect were turned to the task of breaking German [ciphers](https://dict.hjenglish.com/w/cipher" \t "http://www.hjenglish.com/englishwriting/p404070/_blank). One of Turing’s main contributions [whilst](https://dict.hjenglish.com/w/whilst" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) there was to invent the Bombe, an [electromechanical](https://dict.hjenglish.com/w/electromechanical" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) machine used to find the daily settings of the Enigma machine. A fully functional rebuild of the Bombe can be found today at Bletchley Park, along with the excellent Turing exhibition.

Alan Turing was an absolutely vital part of the British war effort and one of the most important people of the 20th century. It is without question that his efforts helped shorten the war significantly, saving the lives of millions of people.

And yet, he was treated badly. A [burglary](https://dict.hjenglish.com/w/burglary" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) at his home led Turing to admit to police that he was a practicing [homosexual](https://dict.hjenglish.com/w/homosexual" \t "http://www.hjenglish.com/englishwriting/p404070/_blank), at a time when it was illegal in Britain. This led to his arrest and [conviction](https://dict.hjenglish.com/w/conviction" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) in 1952 for “ gross indecency ”. Turing was subsequently forced to choose between imprisonment and chemical castration. He chose chemical castration. As a result of his conviction he lost security clearance and was not allowed to continue his work.

On 8 June 1954, Turing was found dead and an [inquest](https://dict.hjenglish.com/w/inquest" \t "http://www.hjenglish.com/englishwriting/p404070/_blank) revealed he had poisoned himself with [cyanide](https://dict.hjenglish.com/w/cyanide" \t "http://www.hjenglish.com/englishwriting/p404070/_blank), but it has been noted that the known evidence is also consistent with accidental poisoning. In 2009, following an [Internet campaign](https://en.wikipedia.org/wiki/Internet_activism" \o "Internet activism), British Prime Minister [Gordon Brown](https://en.wikipedia.org/wiki/Gordon_Brown" \o "Gordon Brown) made an [official public apology](https://en.wikipedia.org/wiki/Alan_Turing" \l "Government_apology_and_pardon_support) on behalf of the British government for “ the appalling way he was treated ”. [Queen Elizabeth II](https://en.wikipedia.org/wiki/Elizabeth_II" \o "Elizabeth II) granted him a posthumous pardon in 2013. The [Alan Turing law](https://en.wikipedia.org/wiki/Alan_Turing_law" \o "Alan Turing law) is now an informal term for a 2017 law in the United Kingdom that retroactively pardons men cautioned or convicted under historical legislation that outlawed homosexual acts.

The US-based Association of Computing Machinery has given The Turing Award annually since 1966. It is the computing world’s highest honor for technical contribution to the computing community and considered equivalent to the Nobel prize.

艾伦·图灵是帮助开拓现代世界的英国英雄。被称为计算机科学之父的他为现代计算机的基础工作做出了卓越贡献。

图灵于1912年6月23日出生于麦达维尔，后在黑斯廷斯长大。他在很小年纪就展示出过人的天分，14岁时他前往多赛特的谢伯恩学校上学。开学的第一天，刚好遇上了大罢工。图灵决心要赶上第一天的课，于是他独自骑了六十英里的自行车去上学。

随后，图灵进入剑桥大学学习数学，后来，他协助研制曼彻斯特马克一号，即世界上最早的计算机之一。

1939年9月4日，即英国对德宣战的第二天，图灵前往布莱切利公园（即战时政府信号密码学校，政府通信总部的前身）报到。在这里，图灵领导了一个小组负责破译德军密码。当时，图灵的最大贡献是发明名为Bombe的电机装置，用于发现德国Enigma密码机的日常设置。今天，在布莱切利公园还有图灵和Bombe的纪念展示。

毫无疑问，图灵是促进英国在二战中取得胜利的重要因素，同时也是二十世纪最伟大的人物之一。他的努力促进了战争的早日结束，挽救了数百万人的生命。

然而，他却受到了不公正对待。一件发生在他家里的盗窃案迫使他向警方承认他是同性恋，而在那时，同性恋在英国是违法的。他因此被捕，并于1952年因“严重猥亵行为”而定罪。最后，他被迫在监禁和化学阉割二者中做出选择，他选择了化学阉割。而因为这所谓的“罪行”，他失去了安全许可权利，工作也被迫中止。

1954年6月8日，图灵死亡，验尸后认定他是食用氰化物自杀，但是也有证据表明他是意外中毒。2009年，一次网络请愿活动，使英国首相戈登·布朗代表英国政府对图灵受到的不公平待遇，作出公开道歉。2013年，英国女王伊丽莎白二世对图灵进行死后特赦。2017年，英国艾伦·图灵法案生效，赦免了历史上因同性恋行为而被定罪的人。

美国计算机协会从1966年开始设立图灵奖，它是计算机界最负盛名、最崇高的一个奖项，有“计算机界的诺贝尔奖”之称。

**Alan Mathison Turing** [OBE](https://en.wikipedia.org/wiki/Officer_of_the_Order_of_the_British_Empire" \o "Officer of the Order of the British Empire) [FRS](https://en.wikipedia.org/wiki/Fellow_of_the_Royal_Society" \o "Fellow of the Royal Society) ( 23 June 1912 – 7 June 1954) was an English [computer scientist](https://en.wikipedia.org/wiki/Computer_scientist" \o "Computer scientist), mathematician, [logician](https://en.wikipedia.org/wiki/Logic" \o "Logic), [cryptanalyst](https://en.wikipedia.org/wiki/Cryptanalysis" \o "Cryptanalysis) and [theoretical biologist](https://en.wikipedia.org/wiki/Mathematical_and_theoretical_biology" \o "Mathematical and theoretical biology). He was highly influential in the development of [theoretical computer science](https://en.wikipedia.org/wiki/Theoretical_computer_science" \o "Theoretical computer science), providing a formalisation of the concepts of [algorithm](https://en.wikipedia.org/wiki/Algorithm" \o "Algorithm) and [computation](https://en.wikipedia.org/wiki/Computation" \o "Computation) with the [Turing machine](https://en.wikipedia.org/wiki/Turing_machine" \o "Turing machine), which can be considered a model of a [general purpose computer](https://en.wikipedia.org/wiki/General_purpose_computer" \o "General purpose computer). Turing is widely considered to be the father of theoretical computer science and [artificial intelligence](https://en.wikipedia.org/wiki/Artificial_intelligence" \o "Artificial intelligence).

During the [Second World War](https://en.wikipedia.org/wiki/Second_World_War" \o "Second World War), Turing worked for the [Government Code and Cypher School](https://en.wikipedia.org/wiki/Government_Communications_Headquarters" \l "Government_Code_and_Cypher_School_.28GC.26CS.29" \o "Government Communications Headquarters) (GC&CS) at [Bletchley Park](https://en.wikipedia.org/wiki/Bletchley_Park" \o "Bletchley Park), Britain's [codebreaking](https://en.wikipedia.org/wiki/Cryptanalysis" \o "Cryptanalysis) centre that produced [Ultra](https://en.wikipedia.org/wiki/Ultra" \o "Ultra) intelligence. For a time he led [Hut 8](https://en.wikipedia.org/wiki/Hut_8" \o "Hut 8), the section responsible for German naval cryptanalysis. He devised a number of techniques for speeding the breaking of German [ciphers](https://en.wikipedia.org/wiki/Cipher" \o "Cipher), including improvements to the pre-war Polish [bombe](https://en.wikipedia.org/wiki/Bomba_(cryptography)" \o "Bomba (cryptography)) method, an [electromechanical](https://en.wikipedia.org/wiki/Electromechanics" \o "Electromechanics) machine that could find settings for the [Enigma machine](https://en.wikipedia.org/wiki/Enigma_machine" \o "Enigma machine). Turing played a pivotal role in cracking intercepted coded messages that enabled the Allies to defeat the Nazis in many crucial engagements, including the [Battle of the Atlantic](https://en.wikipedia.org/wiki/Battle_of_the_Atlantic" \o "Battle of the Atlantic), and in so doing helped win the war. [Counterfactual history](https://en.wikipedia.org/wiki/Counterfactual_history" \o "Counterfactual history) is difficult with respect to the effect Ultra intelligence had on the length of the war, but at the upper end it has been estimated that this work shortened the war in Europe by more than two years and saved over fourteen million lives.

After the war, he worked at the [National Physical Laboratory](https://en.wikipedia.org/wiki/National_Physical_Laboratory,_UK" \o "National Physical Laboratory, UK), where he designed the [ACE](https://en.wikipedia.org/wiki/Automatic_Computing_Engine" \o "Automatic Computing Engine), among the first designs for a stored-program computer. In 1948 Turing joined [Max Newman](https://en.wikipedia.org/wiki/Max_Newman" \o "Max Newman)'s [Computing Machine Laboratory](https://en.wikipedia.org/wiki/Computing_Machine_Laboratory" \o "Computing Machine Laboratory) at the [Victoria University of Manchester](https://en.wikipedia.org/wiki/Victoria_University_of_Manchester" \o "Victoria University of Manchester), where he helped develop the [Manchester computers](https://en.wikipedia.org/wiki/Manchester_computers" \o "Manchester computers) and became interested in [mathematical biology](https://en.wikipedia.org/wiki/Mathematical_biology" \o "Mathematical biology). He wrote a paper on the chemical basis of [morphogenesis](https://en.wikipedia.org/wiki/Morphogenesis" \o "Morphogenesis), and predicted [oscillating](https://en.wikipedia.org/wiki/Chemical_clock" \o "Chemical clock) [chemical reactions](https://en.wikipedia.org/wiki/Chemical_reaction" \o "Chemical reaction) such as the [Belousov–Zhabotinsky reaction](https://en.wikipedia.org/wiki/Belousov%E2%80%93Zhabotinsky_reaction" \o "Belousov–Zhabotinsky reaction), first observed in the 1960s.

Turing was prosecuted in 1952 for homosexual acts, when by the [Labouchere Amendment](https://en.wikipedia.org/wiki/Labouchere_Amendment" \o "Labouchere Amendment), "gross indecency" was still criminal in the UK. He accepted [chemical castration](https://en.wikipedia.org/wiki/Chemical_castration" \o "Chemical castration) treatment, with [DES](https://en.wikipedia.org/wiki/Diethylstilbestrol" \o "Diethylstilbestrol), as an alternative to prison. Turing died in 1954, 16 days before his 42nd birthday, from [cyanide poisoning](https://en.wikipedia.org/wiki/Cyanide_poisoning" \o "Cyanide poisoning). An inquest determined his death as suicide, but it has been noted that the known evidence is also consistent with accidental poisoning. In 2009, following an [Internet campaign](https://en.wikipedia.org/wiki/Internet_activism" \o "Internet activism), British Prime Minister [Gordon Brown](https://en.wikipedia.org/wiki/Gordon_Brown" \o "Gordon Brown) made an [official public apology](https://en.wikipedia.org/wiki/Alan_Turing" \l "Government_apology_and_pardon_support) on behalf of the British government for "the appalling way he was treated." [Queen Elizabeth II](https://en.wikipedia.org/wiki/Elizabeth_II" \o "Elizabeth II) granted him a posthumous pardon in 2013. The [Alan Turing law](https://en.wikipedia.org/wiki/Alan_Turing_law" \o "Alan Turing law) is now an informal term for a 2017 law in the United Kingdom that retroactively pardons men cautioned or convicted under historical legislation that outlawed homosexual acts.