

# History of computing

# Pre – 1600 AD

- Maths and Geometry history (30-300000 years BC)
  - Africa – North, East, Central and West African kingdoms
    - Geometry, Astronomy, Maths and many more technological applications
  - Asia – China
    - Maths - calculation system with the abacus
  - South Europe – Greece
    - Geometry, Astronomy
  - Western Europe – France and Italy
    - Geometry, Maths, Astronomy

Definition of *computer* in English:

# computer


## NOUN

- 1 An electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program.

+ Example sentences

- 1.1 A person who makes calculations, especially with a calculating machine.

## Pronunciation

computer /kəm'pjʊ:tə/ 

1613

- **Richard Braithwaite**
  - “Computer”
  - A person who did calculations (maths)

1642

# Blaise Pascal

- Child prodigy
- Mathematician
- Many maths theories that applied to computing later on
- French
- Pascal's calculator
  - Extremely expensive
  - Failed to sell



1703

# Gottfried Wilhelm Leibniz

- Polymath, mathematician
- Described the binary system – 0's and 1's
- German



1820  
Thomas de Colmar

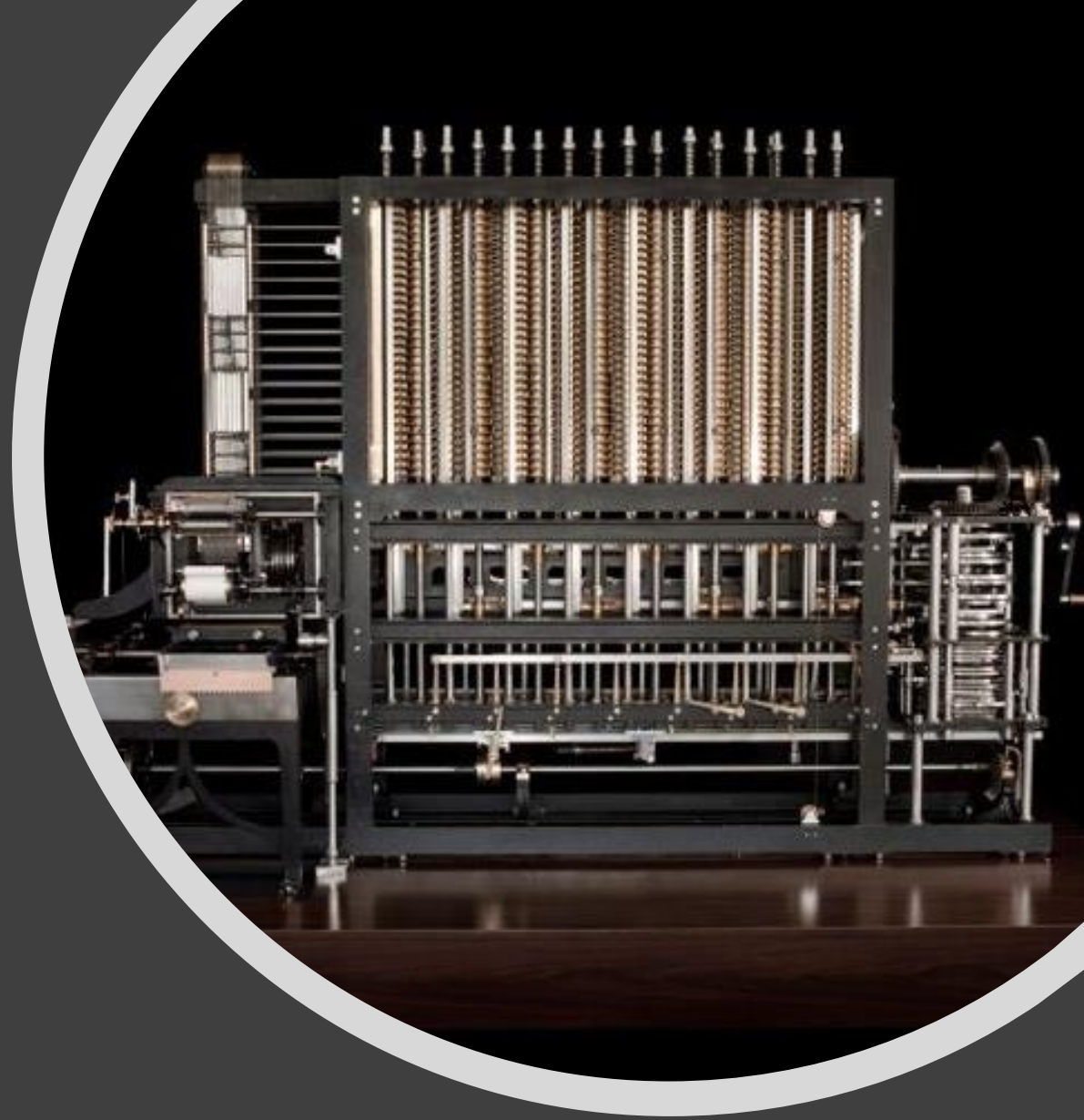
- Arithmometer
  - First commercially successful calculator
- French



1823-1843

## Charles Babbage & Ada Lovelace

- **Charles Babbage describes a set of theoretical machines that can make general calculations**
- **Ada Lovelace working with C.B. writes a mathematical formulae that extends the possible functionality of C.B's machines**
- **Babbage's computer was built over 180 years later just to prove it worked (2002)**
  - **Computer History Museum (California, USA)**



# 1890-1924 Herman Hollerith

- Punch card machine
  - Created and read cards with the 1890 census data
  - Took 3 years – 5 years faster than the last census.
  - Saved \$5Million
- Starts Computer Tabulating Recording Company (CTR)
- H.H retires in 1911
- CTR becomes IBM in 1924

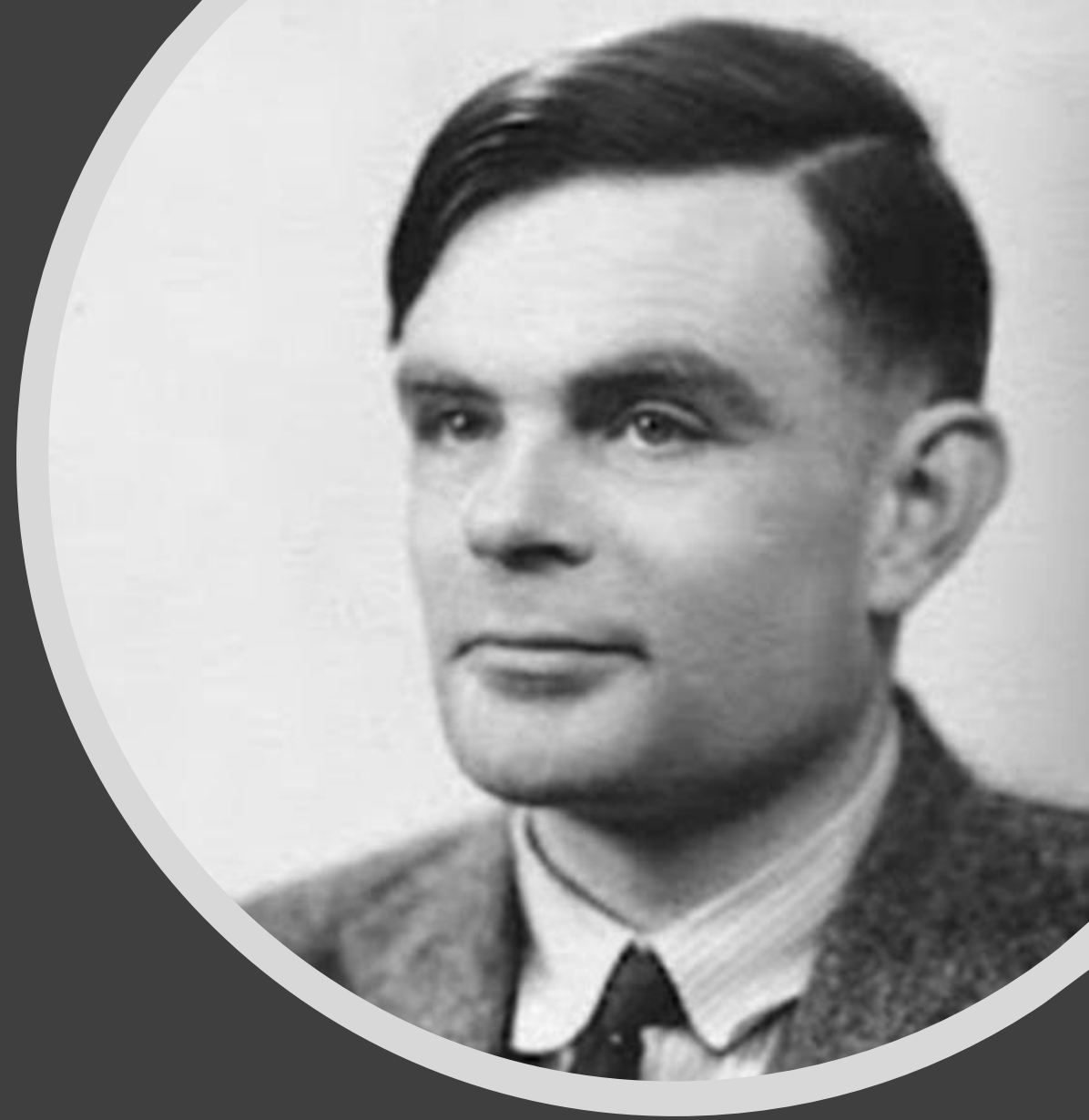




# 1936

## Alan Turing

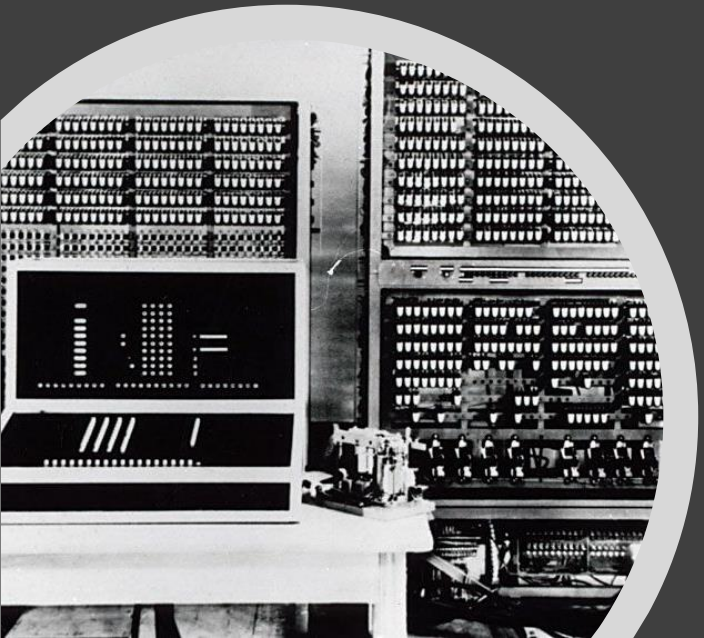
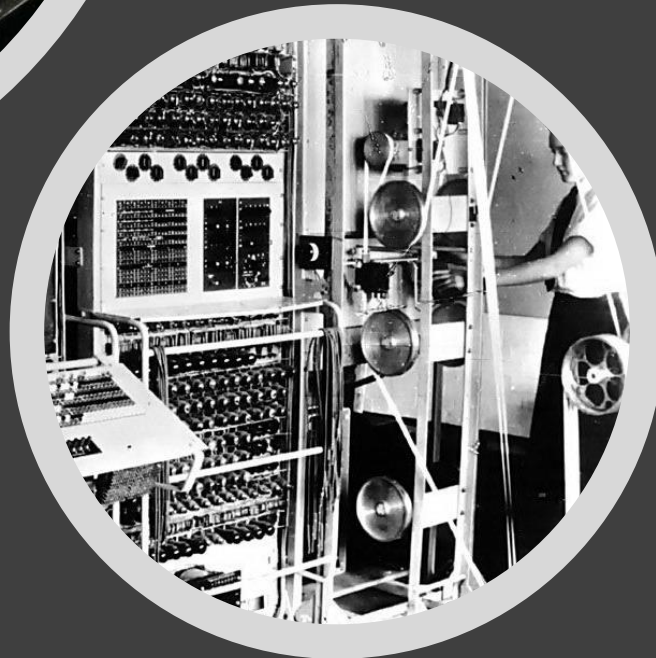
- **Polymath**
- **Described the modern computer**
- **Build the machine that decrypted the German messages in WW2**
- **Came up with a test to determine if a computer can think for itself**
- **Described the universal computing machine**





# 1940-1943

- Many computer models come out rapidly improving
- ABC computer
- ENIAC (1000 sq feet)
- Z3 Computer
- Colosus (Bletchley Park)



# 1953-1986

## Katherine Johnson

- **Mathematician**
- **Worked for NACA (which became NASA)**
- **28 research papers - not fully attributed to her (due to racial prejudice her papers were “co-authored” with a white male scientist)**
- **Calculated trajectories for the 1962 Orbital mission and the Apollo Lunar Lander**
- **Presidential Medal of Honour at 97**
- **Currently 100 years old**



# 1989

## Philip Emeagwali

- **Mathematician, Genius**
- **3 Masters + 1 Phd**
- **“father of the Internet”**
- **He first successfully programmed a massively parallel computer – 65536 processors**
- **Yahoo, Google and others use his methods to control big warehouses full of computers that process billions of users’ searches**
- **Nigerian**

