

John Maynard Keynes 1883-1946



born: Cambridge, England
Applied mathematics to business and economics, inventing a whole new set of ideas called Keynesian economics.

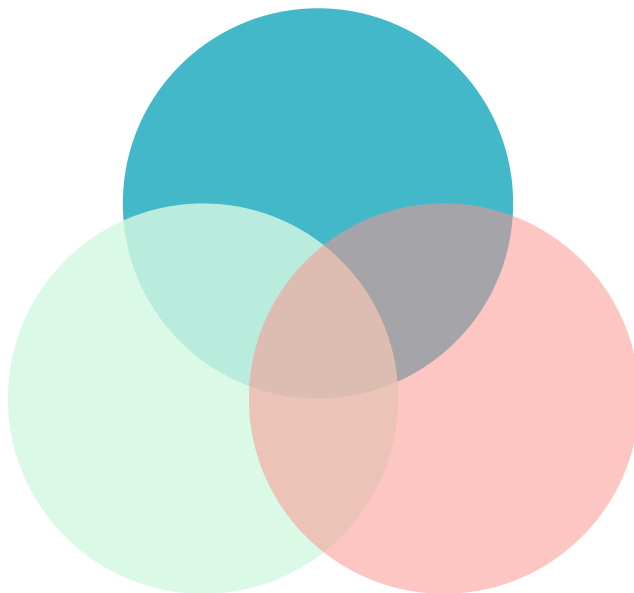
John Maynard Keynes earned a bachelor's degree in mathematics and then worked for the English government in the Treasury during the First World War. He was allowed to conscientiously object to being called up for military service because his work was so important. He published many books on probability and economics. He also had several homosexual relationships, for which he (and his ideas) received criticism.

Florence Nightingale 1820-1910

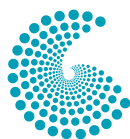
born: Florence, Italy
Used statistics and data to improve the lives of patients and make changes to nursing practices in England.

Florence Nightingale was educated by her father in history, mathematics, Italian, classical literature, and philosophy. She was a manager and trainer of nurses during the Crimean War, professionalising nursing for women. She was an exceptional statistician, using data to improve medical practice, and invented the Nightingale rose diagram. She writes of 'exciting passions' in women and sharing their beds which has caused modern writers to suggest some of these relationships were homosexual.

how might the identity of 'mathematician' overlap with other identities that we hold?



when might this affect the mathematical ideas we come up with... and when might it not?



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mathematics**
& its applications

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who is a mathematician?

some starting points for talking about identities and representation in mathematics



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The identity of 'mathematician' may be related to questions of power and status.

For example, who gets to decide whether someone is a mathematician or not?

Is it permanent or temporary?

Do you think it is just as easy to be considered a mathematician if you are:

-a woman?

-black?

-gay or lesbian?

-a full-time parent or carer?

-disabled?

-neurodiverse?

-very young?

-from the Global South?

-not studying maths right now?

How relevant are these characteristics to someone's power to make sense of maths?

How relevant do you think other people might consider them to be?

The mathematicians we know about and see represented might be a biased sample.

For example, some of the mathematicians throughout history who have held marginalised identities may have been forgotten about, or erased. Their contributions might have been credited to someone else, or undervalued. Their ideas might have been dismissed. They might not have been granted their right to an education in mathematics in the first place.

Here are some mathematicians to discuss as examples:



Professor Grace Alele-Williams

1932–2022

born: Warri, Nigeria
Master's degree in maths and PhD in maths education - the first Nigerian woman to be awarded a doctorate.

Grace Alele-Williams was a mathematics education professor who was the first female Vice Chancellor of a Nigerian university. She received many awards and honours, including the Order of the Niger, Fellow of the Mathematical Association of Nigeria and Fellow of the Nigerian Academy of Education. She designed many innovative mathematics education programmes, in particular supporting women and teachers to access education.

Dr David Blackwell

1919–2010

born: Illinois US
Graduated high school at age 16 and earned PhD at age 22.

David Blackwell was the first African American inducted into the National Academy of Sciences, the first black tenured faculty member at the University of California, Berkeley, and the seventh African American to receive a PhD in mathematics. He was prevented from attending lectures or undertaking research at Princeton University because of his race. He made a lasting impact in the fields of statistics and game theory.



Mary Golda Ross

1908–2008

born: Oklahoma, US

The great-granddaughter of the Cherokee Chief John Ross (ᏊᏍᏆᏚᏍᏔᏅ/guwisguwi).

Pioneering aerospace engineer and mathematician.

Mary Golda Ross was the first known (or perhaps recognised) Native American female engineer. After gaining a bachelor's and a master's degree in mathematics, she worked for Lockheed Aircraft Corporation as an engineer during World War II, designing fighter jets. Afterwards, she stayed and focused on space travel, working on the Polaris re-entry vehicle, Poseidon and Trident missiles. She was one of the authors of the NASA Planetary Flight Handbook Vol. III. She was nicknamed 'Gold.' Much of her work is still unknown because it is classified (top secret).

Shakuntala Devi

1929–2013

born: Bangalore, India
Her parents discovered she had an amazing ability to memorise and calculate with numbers when she was three years old.

Despite having very little formal schooling, Shakuntala Devi broke records for mental mathematical calculation throughout her life. For example, in 1980 she demonstrated the multiplication of two 13-digit numbers in 28 seconds. She wrote many books exploring the techniques she used. She also wrote a book exploring homosexuality and saying it should not be a crime, but that people should be fully accepting and tolerant towards those who are homosexual.

