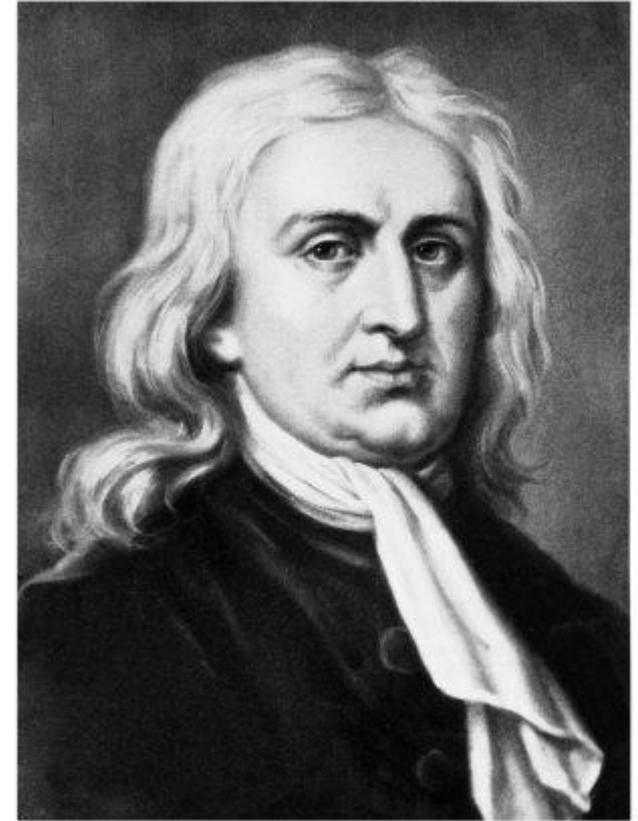# Isaac Newton

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Introduction

In Mathematics, it takes experience and qualifications to come up with new theories. Newton had it all! He was a physicist, mathematician, astronomer, philosopher, and alchemist. Seki was just a mathematician.

Leibniz was a ... Librarian.

Timeline

- 1664: Newton laid out the foundation of differential calculus

- 1665: Newton laid out the method of Fluxions

- 1672-1676: Leibniz got his mathematical education

- 1673: Leibniz's first account of his calculus version

- 1674: Seki wrote, *Hatsubi Samp: Solution to Math Problems*

Timeline

- 1684: Leibniz's work was published

- 1683: Seki came up with his theory of Determinants

- 1687: Newton wrote *Principia Mathematica*

Newton- Founder of Calculus

- Newton wrote his *Method of Fluxions*, which he considered a curve as generated by the continuous motion of a point. This proving that the first and second derivative always exist and represent velocity and acceleration

- The Royal Society credited Newton with the discovery of Calculus

- Newton was President of the Royal Society in 1703 and was reelected President until he passed away

- Newton wrote two letters to H. Oldenburg, the secretary of the Royal Society at the time, describing his mathematical methods

- He established the binominal theorem

Newton Cont.

- He created a method of finding roots of equations which are still used today

- 1664 is when Newton began his works and Leibniz didn't start until 1672

- He was a professor in Mathematics at Trinity College

- He applied his theories to physics, experiments, and results

- He developed limits and concrete reality

Why Leibniz is NOT

- Newton started working on Calculus first.

- It is thought that he may have seen Newton's manuscript

- He wrote letters back and forth with Newton- so he knew what Newton was working on

- He used different sets of symbols, but he performed the same work

- It was thought he plagiarized

- His logical base is different than our current one

Why Seki is NOT

- His algebraic alphabet was not suitable for general equations of the nth degree

- His work was done with other people. He didn't discover anything independently

- His math is based on the 13th and 15th centuries

- He was credited for finding pi to the 10th decimal place, but this was not a new discovery

Concluding Thoughts!

It is clearly stated that Newton was the inventor of Calculus. He was very successful in his findings and experiments. Calculus today is still based on his theories and is widely used through out the world. The other candidates were not as qualified as Newton.

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