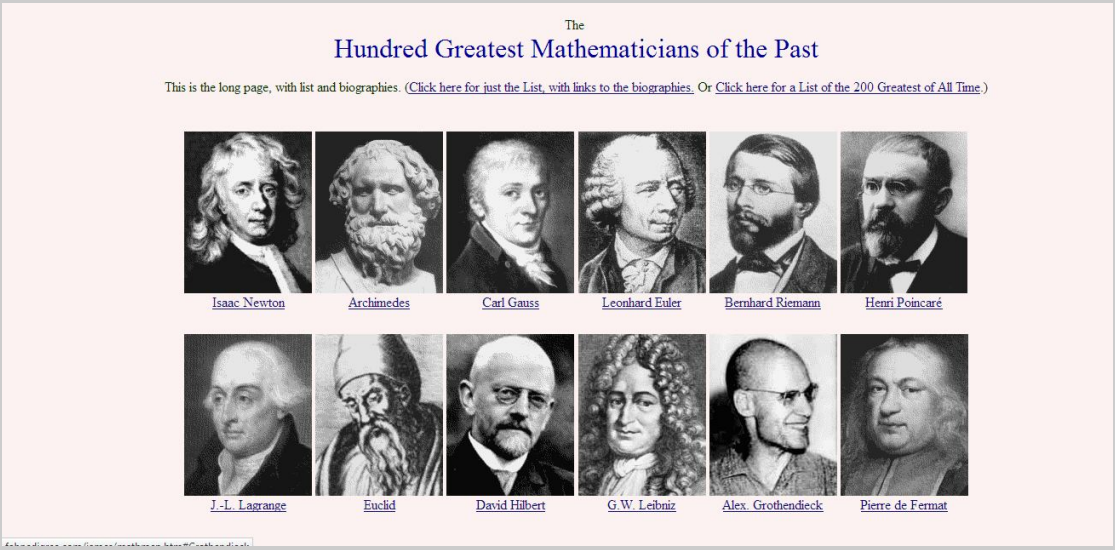
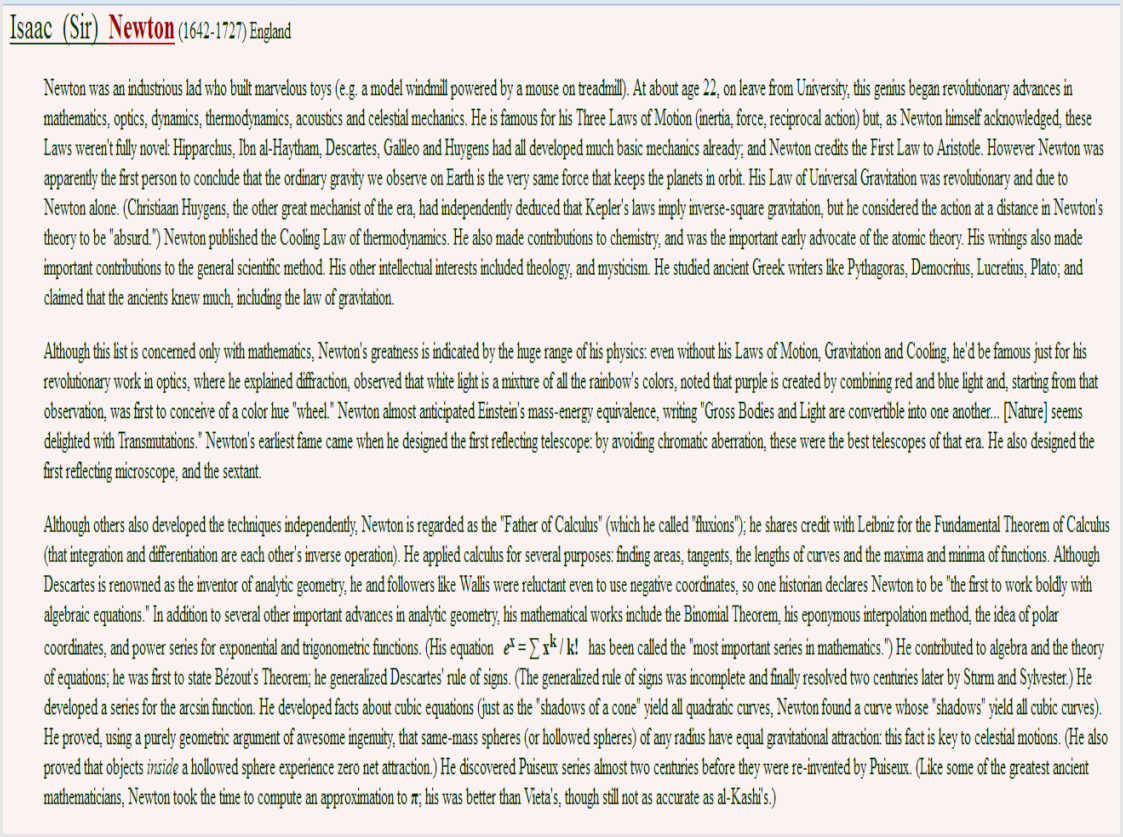
Name of the Tool	**The hundred greatest mathematicians of the past**
Home Page	
Logo	The Hundred Greatest Mathematicians of the Past
URL	http://fabpedigree.com/james/mathmen.htm
Subject	Mathematicianss-Biography
Accessibility	Free
Language	English
Publisher	James Dow Allen
Brief History	This site was established in 1998.
Scope and Coverage	This site covers famous mathematicians' biography with description and in some cases photos are also available. It covers 100 biographies of greatest scientists and also provides

	link of 200 biographies of scientists. Those mathematicians who are born before 1930 have been taken and must have historical importance.
Kind of Information	Biographical tool generally contains description of life span of a notable person. This is a site contains biographies of mathematician. Each entry contains year of birth, year of death, description about the person, career, professor, invention, famous for etc has been described.
Special Features	❖ List of two hundred greatest mathematicians are also presented by clicking on the link. ❖ Omission of entry is of this site is also presented here.
Arrangement Pattern	Biographies are arranged chronologically according to year of birth at the end of home page.



Isaac (Sir) **Newton** (1642-1727) England

Newton was an industrious lad who built marvelous toys (e.g. a model windmill powered by a mouse on treadmill). At about age 22, on leave from University, this genius began revolutionary advances in mathematics, optics, dynamics, thermodynamics, acoustics and celestial mechanics. He is famous for his Three Laws of Motion (inertia, force, reciprocal action) but, as Newton himself acknowledged, these Laws weren't fully novel: Hipparchus, Ibn al-Haytham, Descartes, Galileo and Huygens had all developed much basic mechanics already; and Newton credits the First Law to Aristotle. However Newton was apparently the first person to conclude that the ordinary gravity we observe on Earth is the very same force that keeps the planets in orbit. His Law of Universal Gravitation was revolutionary and due to Newton alone. (Christiaan Huygens, the other great mechanist of the era, had independently deduced that Kepler's laws imply inverse-square gravitation, but he considered the action at a distance in Newton's theory to be "absurd.") Newton published the Cooling Law of thermodynamics. He also made contributions to chemistry, and was the important early advocate of the atomic theory. His writings also made important contributions to the general scientific method. His other intellectual interests included theology, and mysticism. He studied ancient Greek writers like Pythagoras, Democritus, Lucretius, Plato; and claimed that the ancients knew much, including the law of gravitation.

Although this list is concerned only with mathematics, Newton's greatness is indicated by the huge range of his physics: even without his Laws of Motion, Gravitation and Cooling, he'd be famous just for his revolutionary work in optics, where he explained diffraction, observed that white light is a mixture of all the rainbow's colors, noted that purple is created by combining red and blue light and, starting from that observation, was first to conceive of a color hue "wheel." Newton almost anticipated Einstein's mass-energy equivalence, writing "Gross Bodies and Light are convertible into one another... [Nature] seems delighted with Transmutations." Newton's earliest fame came when he designed the first reflecting telescope: by avoiding chromatic aberration, these were the best telescopes of that era. He also designed the first reflecting microscope, and the sextant.

Although others also developed the techniques independently, Newton is regarded as the "Father of Calculus" (which he called "fluxions"); he shares credit with Leibniz for the Fundamental Theorem of Calculus (that integration and differentiation are each other's inverse operation). He applied calculus for several purposes: finding areas, tangents, the lengths of curves and the maxima and minima of functions. Although Descartes is renowned as the inventor of analytic geometry, he and followers like Wallis were reluctant even to use negative coordinates, so one historian declares Newton to be "the first to work boldly with algebraic equations." In addition to several other important advances in analytic geometry, his mathematical works include the Binomial Theorem, his eponymous interpolation method, the idea of polar coordinates, and power series for exponential and trigonometric functions. (His equation $e^x = \sum x^k / k!$ has been called the "most important series in mathematics.") He contributed to algebra and the theory of equations; he was first to state Bézout's Theorem; he generalized Descartes' rule of signs. (The generalized rule of signs was incomplete and finally resolved two centuries later by Sturm and Sylvester.) He developed a series for the arcsin function. He developed facts about cubic equations (just as the "shadows of a cone" yield all quadratic curves, Newton found a curve whose "shadows" yield all cubic curves). He proved, using a purely geometric argument of awesome ingenuity, that same-mass spheres (or hollowed spheres) of any radius have equal gravitational attraction: this fact is key to celestial motions. (He also proved that objects *inside* a hollowed sphere experience zero net attraction.) He discovered Puiseux series almost two centuries before they were re-invented by Puiseux. (Like some of the greatest ancient mathematicians, Newton took the time to compute an approximation to π; his was better than Vieta's, though still not as accurate as al-Kashi's.)

Remarks	This is an important site contains the biographical details of famous mathematicians whose inventions are most popular in this field and who are the part of historical importance.
Comparable Tools	➢ The famous mathematician (http://famous-mathematicians.org/) ➢ Biographies of Women Mathematician (https://www.agnesscott.edu/lriddle/women/women.htm)
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