

Carl friedrich gauss

[Science](#), [Mathematics](#)



Johann Carl Friedrich Gauss was born on April 30, 1777 in Germany, to poor working class parents. His mother did not record the date of his birth, she didn't even remember the day he was born all she remembered was that it was eight days before the feast of the ascension, which happens 40 days after Easter Gauss ended up figuring out when he was born on his own. Gauss made his first ground breaking mathematical discoveries while still a teenager. He completed *Disquisitiones Arithmeticae*, his magnum opus, in 1798 at the age of 21, though it was not published until 1801. This work was fundamental in consolidating number theory as a discipline and has shaped the field to the present day. Gauss's intellectual abilities attracted the attention of the Duke of Braunschweig, who sent him to the Collegium Carolinum, which he attended from 1792 to 1795, and to the University of Göttingen from 1795 to 1798. While in university, Gauss independently rediscovered several important theorems; his breakthrough occurred in 1796 when he was able to show that any regular polygon with a number of sides which is a Fermat prime and, consequently, those polygons with any number of sides which is the product of distinct Fermat primes and a power of 2 can be constructed by compass and straightedge. The discovery of Ceres led Gauss to his work on a theory of the motion of planetoids disturbed by large planets, eventually published in 1809 as *Theoria motus corporum coelestium in sectionibus conicis solem ambientum* (theory of motion of the celestial bodies moving in conic sections around the sun). In the process, he so streamlined the cumbersome mathematics of 18th century orbital prediction that his work remains a cornerstone of astronomical computation. In 1818 Gauss, putting his calculation skills to practical use, carried out a geodesic

survey of the state of Hanover, linking up with previous Danish surveys. To aid in the survey, Gauss invented the heliotrope, an instrument that uses a mirror to reflect sunlight over great distances, to measure positions. Gauss also claimed to have discovered the possibility of non-Euclidean geometries but never published it. This discovery was a major paradigm shift in mathematics, as it freed mathematicians from the mistaken belief that Euclid's axioms were the only way to make geometry consistent and non-contradictory. Carl Friedrich Gauss died in Göttingen, Germany, on February 23 1855. He died in his sleep. Waldo, Dunnington. Carl Friedrich Gauss. Washington, DC: Mathematical Association of America, 2004. Print.