

Leonhard euler a short biography essay sample

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Leonhard Euler (15 April, 1707- 18 September, 1783) was a Swiss mathematician and physicist. Born in Basel Switzerland, later moved to neighboring town, Riehen, Euler attended a rather poor school that taught no mathematics. His father having studied theology at the University of Basil managed to teach him some, which ignited an interest in Euler for the subject and at just 14, he began attending the University of Basil studying philosophy and theology. He completed these studies in 1726. Leonhard Euler: The first St Petersburg years by R. Calinger summarizes this time period flawlessly. "... after 1730 he carried out state projects dealing with cartography, science education, magnetism, fire engines, machines, and ship building.

... The core of his research program was now set in place: number theory; infinitary analysis including its emerging branches, differential equations and the calculus of variations; and rational mechanics. He viewed these three fields as intimately interconnected. Studies of number theory were vital to the foundations of calculus, and special functions and differential equations were essential to rational mechanics, which supplied concrete problems." However, the publication of his book *Mechanica* in 1736 was the beginning of Euler's major mathematical discoveries.

Making a plethora of contributions to calculus, topology, and many other areas of mathematics has earned him vast recognition throughout our society even today. For example Euler's Identity: $e^{i\pi} + 1 = 0$. According to Isaac M. McPhee, this equation is "...considered to be one of the most beautifully elegant equations ever derived from the fundamental constants." Euler's number e is also a very important irrational, fundamental constant in <https://assignbuster.com/leonhard-euler-a-short-biography-essay-sample/>

mathematics. This contribution has aided in understanding the continuous growth of compound interest. In the field of topology, Euler was able to solve a problem entitled "The Bridges of Konigsberg."

In Konigsberg, Germany, seven bridges were built to cross the river that flowed through the city. Citizens questioned if it were possible to walk around the city crossing each bridge only once. This was one of the first problems in topology. In approximately 1735, Euler planned a route that solved the problem. With countless contributions to mathematics, Leonhard Euler's legendary discoveries are still aiding mathematicians and physicists today.

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