**Topic:** Leonhard Euler

**Notes on Topic:** His achievements are overwhelming  
His works fill over 70 large volumes  
Born in Basel, Switzerland in 1707  
His father worked out an arrangement where Euler would study with Johann Bernoulli, he showed genius even at a young age  
The boy would work during the week, and then on Saturday afternoons, he would ask Johann for help on topics that eluded him  
He was producing high quality math papers at the age of 19 and won a prize from the French Academy for his paper on optimum placement of mass on a ship (at this point in his life, Euler had never even seen an ocean-going vessel)  
Euler was appointed to a position at the St. Petersburg Academy in Russia, but all the slots being filled in the natural sciences, he took up a position in medicine and physiology  
In 1733 he got his job as a mathematical chair   
After losing sight in his right eye, he never slowed down, and his mathematical accomplishments were soon to flourish  
He continued to solve problems in geometry, number theory and combinatorics as well as mechanic, hydrodynamics and optics  
“It is both poignant and somehow remarkably uplifting to imagine a man slipping into blindness yet explaining to the world the mysteries of optical light” JTG Pp208  
  
In 1741 Euler left St. Petersburg and took a position at the Berlin Academy  
At the Berlin Academy, under Frederick the Great, Frederick considered Euler “too little the sophisticate, too much the quiet, unassuming scholar” and in reference to his vision, called Euler the “mathematical cyclops”   
This type of treatment sent Euler back to St. Petersburg under Catherine the Great, where he would remain for the last 17 years of his life  
Euler was known for being a kind and generous man, a good foil for his peer Isaac Newton  
“It is comforting to know that genius of this order does not necessarily bring with it a neurotic personality.” JTG 210  
  
Euler ultimately lost sight in his other eye, at this point he did not slow down  
He dictated his works to an associate, as to continue his mathematical writings  
His number-theoretical investigations were astounding: he memorized the first 100 prime numbers and their squares, cubes, and fourth, fifth and sixth powers  
He was able to do very difficult calculations mentally, even when it meant he had to retain 50 places of accuracy  
  
Euler’s reputation also stems from the writings of his books  
Although he would write books with the highest mathematical sophistication he did not find it demeaning to write more elementary math books as well  
His best known text *Introductio in Analysin Infinitorum* was compared to Elements in that is surveyed the discoveries of earlier mathematicians, organized and cleanup the proofs and rendered the previous works obsolete  
He later added a volume of differential calculus and three volumes on integral calculus  
  
Euler’s mathematical writings are the first that truly look modern to today’s readers  
He wrote with an understanding that not all the readers have his mathematical abilities   
Euler’s collection of papers span over 73 volumes, a total of 886 books and articles written in Latin, French or German  
Euler’s vast collections span over new topics as well, such as graph theory, calculus of variations, complex analysis, to differential equations  
“...there is ample precedent for naming laws and theorems for persons other than their discoverers, else half of analysis would be named for Euler”  
Leonhard Euler died suddenly on September 7, 1783

**Additional Suggested Reading**: None

**Assignment:** None