

Rene Descartes



Rene Descartes was born on March 31, 1569 in La Haye, France. His mother died soon after his birth. At the age of 8, his father enrolled him in Jesuit school at La-Fleche. Rene had frail health so the rector Father Charlet allowed Rene to stay in bed as long as he wanted to in the morning. He continued this practice most of his life. These long quiet mornings of quiet meditation is when Descartes developed most of his philosophy and mathematics.

As a young child, Descartes would accept nothing based on mere authority. He wanted to know the reasons for everything. As a student, Descartes began suspecting that the Jesuit education he was receiving was “almost barren of human significance with little power to enrich or improve human life.”ⁱ He considered the philosophy, ethics and morals that he was taught to be baseless superstitions. Descartes began asking the questions “how do we know anything?” and “how then shall we ever find out anything?” Descartes overcome his rational skepticism with the fact that “I think, therefore I am”.ⁱⁱ It was this foundation on which he based his thinking and work.

Descartes left the Jesuit school disgusted with the “aridity of the studies on which he had put so much hard labor”.ⁱⁱⁱ He went to Paris where he enjoyed the pleasures of the flesh with youthful abandon. However, Descartes soon tired of this lifestyle and enlisted in the army of Maurice of Orange in 1617. The lack of action by the Dutch army caused Descartes to enlist with Elector of Bavaria who was waging a bloody war with Bohemia. In 1622, he returned to Paris in an unsuccessful attempt to gain a commission in the army. Descartes then joined the Duke of Savoy for a bloody campaign in which he distinguished himself.^{iv}

Descartes then moved to Paris for three years of meditation and mathematical investigation. This was spent as a “well-dressed man of the world, clad in fashionable taffeta and sporting a sword as benefitted his gentlemanly rank”. The sword was more than decoration as this brief anecdote reveals. A drunk was insulting the lady that Descartes was with. Descartes took his sword and flicked the drunk’s sword out of his hand. He spared the drunk’s life “because he was too filthy to be butchered before a beautiful lady.”^v

Descartes would fight one more battle when he joined the King of France on the battlefield at La Rochelle. He then moved to Holland where he stayed for the next twenty years. In order to ensure his privacy, Descartes would change his address twenty four times during this period. He communicated with the rest of the intellectual world through his friend Mersenne.^{vi} During this time, Descartes studied a diversity of subjects including “optics, chemistry, physics, anatomy, embryology, medicine, astronomical observations and meteorology”.^{vii} He was gaining fame for his intellectual contributions throughout Europe. As result a princess and a queen demanded that he tutor them. The first was Princess Elizabeth of Bohemia, who was fluent in six languages and had voracious appetite for knowledge. The second was Queen Christine of Sweden, who required Descartes to be at palace at each morning at 5:00 A.M. Descartes would fall ill as result and died February 11, 1650.^{viii}

Descartes is best known for developing analytic geometry and thus the beginning of the modern era of mathematics. This can be traced back to a November 10, 1619, when Descartes had three vivid dreams. From these dreams Descartes derived “^{ix}that the key to understanding nature was to apply algebra to geometry and thereby use mathematics to unlock the secrets of the universe”. Descartes would not publish his method until eighteen years later. Finally in 1637, his friend convinced him to publish *Method* and analytic geometry was given to the world.

ⁱ George F. Simmons, *Calculus Gems: Brief Lives and Memorable Mathematics*. (Washington D.C.: The Mathematical Association of America, 2007) p. 85

ⁱⁱ E.T. Bell, *Men of Mathematics: The Lives and Achievements of the Great Mathematicians from Zeno to Poincare*, (Toronto: Simon & Schuster, 1937), p.39

ⁱⁱⁱ Bell, 38.

^{iv} Lloyd Motz and Jefferson Hane Weaver, *The Story of Mathematics*, (New York: Plenum Press, 1993), p. 108-109.

^v Bell, 42.

^{vi} Simmons, 87.

^{vii} Bell, 45

^{viii} Motz, 110-113.

^{ix} Motz, 108-109.