

Hamilton 1805 to 1865



Hamilton was born in Dublin, Ireland in 1805 and became one of the greatest Irish mathematicians. Initially he took an interest in languages but in his early school days he had affection for mathematics. At the age of 18 he entered Trinity College, Dublin and spent the rest of his life there. In 1827 Hamilton was appointed Professor of Astronomy in Trinity College but he did not take much interest in astronomy and devoted all his time to mathematics. His passion was mathematics.

Hamilton is best known for his work on **quaternions** which is a vector space of 4 dimensions. In fact in 1843 whilst he was walking along the local canal in Dublin with his wife he had a flash of inspiration and discovered the formula for quaternion multiplication.

The formula was $i^2 = j^2 = k^2 = ijk = -1$ and at present there is plaque at the bridge stating this formula. He also invented the dot and cross product of vectors. Throughout his life he had problems with alcohol and love. He fell in love with Catherine but due to unfortunate circumstances he ended up marrying Helen which he regretted the rest of his life.