

The Impermanence of Mathematics
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Professor Neumann began his lecture by demonstrating that a more commonly held view was in fact the “permanence” of mathematics. Euclidean geometry was established in 330 BC, quadratic equations first appeared in Mesopotamia and Egypt almost 4000 years ago and even the concept of perfect numbers dates back to medieval times. Furthermore most of the mathematics taught at ‘O’ and later GCSE level was firmly established by the end of the 14th century, ‘A’ level by the end of the 17th century and even third year graduate specialist subjects by the end of the 19th century. Through a study of the history of mathematics, Professor Neumann has however come to the conclusion that there is in fact an “impermanence” in mathematics and change has occurred. Euclidean geometry had begun to be criticised in the 17th century and was eventually replaced by non-Euclidean, most of the medieval writings on perfect numbers has now been shown to be in error and the theory of quadratic equations has also needed updating. As the philosophy of mathematics has evolved and new concepts such as negative, complex and imaginary numbers were developed, changes have been needed and many of the fundamental principles of mathematics have had to be revisited.

Given on Wednesday 10 January, at the Royal Agricultural College.