

UMW Department of Mathematics Colloquium Announcement

Curious Catalan Numbers

Presented by

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Abstract: We are all familiar with Fibonacci's famous sequence that begins 1, 1, 2, 3, 5, 8, ... as well as other popular sequences such as the perfect squares 1, 4, 9, 16, 25, ... or the triangular numbers 1, 3, 6, 10, 15, ... But what about the sequence 1, 1, 2, 5, 14, ...? These are the Catalan numbers, named after the Belgian mathematician Eugène Catalan (1814 – 1894), despite having been described by Leonhard Euler 100 years earlier. It turns out these numbers take a variety of different guises as they provide the solution to numerous combinatorial problems! After introducing this sequence, we will explore some of the many ways in which the Catalan numbers are hidden throughout mathematics.

