The talk will concern two remarkable facts:

(1) For the first forty non-negative integers \( n \), the polynomial \( n^2 + n + 41 \) is prime!

(2) The value of \( e^{\pi \sqrt{163}} \) is within \( 10^{-12} \) of an integer.

These two facts turn out to be closely linked to each other, and in fact are best understood in terms of the arithmetic properties of numbers of the form \( (a + b\sqrt{-163})/2 \) with integers \( a \) and \( b \). In the course of explaining this, I will tell a truncated version of the engrossing history of Gauss' class number problem.