CORRIGENDUM


For 215789, read 2157989.

This trivial error has the following real interest. The integer

\[ N = N_1(83, 3) = \frac{10^{84} + 17}{9} \]

has 84 decimal digits: 83 ones followed by a three. There was little doubt here that \( N \) is prime. But Williams and D. H. Lehmer found that

\[
\begin{align*}
N - 1 &= 2^3 \cdot 1531 \cdot H_1, \\
N + 1 &= 2 \cdot 3 \cdot H_2, \\
N^2 + 1 &= 2 \cdot 5 \cdot 2069 \cdot 2157989 \cdot H_4, \\
N^2 + N + 1 &= 7 \cdot 14869 \cdot H_3, \\
N^2 - N + 1 &= 3 \cdot 271 \cdot H_6,
\end{align*}
\]

and that the five composite \( H_i \) have no prime divisor < 5,988,337,680. This (unusual) paucity of moderate prime factors meant that Williams was unable to prove \( N \) prime even with the powerful method of Williams and Holte.

But recently Lenstra and Cohen easily proved \( N \) prime with their efficient modification of Adleman’s method. Their method, with complete details, will be published in this journal.

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