Landau's problems

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Landau's problems are four conjectures about prime numbers which were unsolved at the time Edmund Landau presented on them at International Congress of Mathematicians of 1912.

1. Goldbach's conjecture

2. The twin prime conjecture

3. Legendre's conjecture

4. The conjecture that there are infinitely many primes of the form $p = n^2 + 1$.

Unlike similar collections of unsolved problems, this collection does not include the Riemann hypothesis.

Almost a hundred years later, all four of Landau's problems are still unsolved.