A NEW LOWER BOUND FOR ODD PERFECT NUMBERS

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Abstract

We describe an algorithm for proving that there is no odd perfect number less than a given bound K (or finding such a number if one exists). A program implementing the algorithm has been run successfully with $K = 10^{160}$, with an elliptic curve method used for the vast number of factorizations required.

Comments

Only the Abstract is given here. The full paper appeared as [1]. For a sequel which extended the result to $K = 10^{300}$, see [2]. The integer factorizations used in the proofs are available by anonymous ftp [3].

References

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