

Corrigendum

BRENT, R.P., AND KUNG, H.T., "The Area-Time Complexity of Binary Multiplication," *J. ACM* 28, 3 (July 1981), 521-534.

On page 528 of our paper we conjectured on the basis of numerical evidence that

$$\lim_{N \rightarrow \infty} \frac{\mu(N) \log_2 \log N}{N^2} = 1, \quad (1)$$

where $\mu(N) = |\{ij | 0 \leq i < N, 0 \leq j < N\}|$. It follows from a result of Erdős [1] that the conjecture is false; in fact, Erdős showed that

$$\mu(N) = \frac{N^2}{(\log N)^{\alpha+o(1)}}, \quad (2)$$

where $\alpha = 1 - (1 + \ln \ln 2) / \ln 2 \approx 0.086$. Our numerical evidence is insufficient to distinguish between the functions $\log_2 \log N$ and $(\log N)^{\alpha+o(1)}$. Fortunately, none of the results of our paper depend on conjecture (1).

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REFERENCE

1. ERDOS, P. *Leningrad Universitet Vestnik (Matematika, Mekhanika, Astronomua)* 15 (1960), 41-49

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