The function $M(n,T) = \sum \mu(d) : d|n, d \leq T$ is studied in this paper. It is shown that $M(n,T)$ is usually zero, in two senses. First, the density of the integers n such that $M(n,T) \neq 0$ tends to zero as a function of T. Second, as previously conjectured by Erdős, for almost all n we have $\sum\{1/T : M(n,T) \neq 0\} = o(\log n]$. Both results are given in precise quantitative form, and are shown to be connected with other conjectures and unsolved problems, in particular with Erdős' conjecture that almost all integers n have two divisions d,d' such that $d < d' < 2d$.

Classification:

11A25 Arithmetic functions, etc.

11N05 Distribution of primes

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