

1056-11-1527 **Mitsuo Kobayashi*** (mitskobay@dartmouth.edu), 6188 Kemeny Hall, Hanover, NH 03755. *On the Density of Abundant Numbers*. Preliminary report.

A natural number is called abundant if it is smaller than the sum of its proper divisors. It is known that the abundant numbers have a positive asymptotic density which has been calculated by Deléglise to be $0.247\dots$. We will present results on the computational complexity of the algorithm used by Deléglise as well as recent improvements to the algorithm which allow us to discover the next decimal digit. (Received September 22, 2009)