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Mits Kobayashi* (mkobayashi@cpp.edu), Department of Mathematics and Statistics, Cal Poly Pomona, 3801 West Temple Avenue, Pomona, CA 91768. *A generalization of a series for the density of abundant numbers.* Preliminary report.

We call a number abundant if the sum of its proper divisors exceeds the number itself. In 1933, Davenport proved that the set of abundant numbers has a natural density. Since then, several improvements have been made to determine upper and lower bounds for this density. A recent result uses the multiplicative function $\sigma(n)/n$ to express the density as a series which can be used to find a lower bound for the density. We generalize this result to a large class of multiplicative functions. (Received January 30, 2015)