1047-11-454 **Paul Pollack*** (`pppollac@illinois.edu`), 1409 West Green Street, Department of Mathematics, MC-382, University of Illinois at Urbana-Champaign, Urbana, IL 61801. *Some problems concerning the fraction $\sigma(n)/n$.*

Let $\sigma(n)$ denote the sum of the divisors of the natural number n. The ratio $\sigma(n)/n$ has been of interest ever since the ancient Greeks, who classified numbers as *deficient*, *perfect*, or *abundant* according as $\sigma(n)/n$ is less than, equal, or greater than 2 (respectively). We survey what is known about this ratio, paying particular attention to the contributions of Erdős. We also describe some new results of the speaker concerning the amount of cancellation when $\sigma(n)/n$ is put in lowest terms. These results are connected with some 50-year old claims of Erdős. (Received February 03, 2009)