1105-11-155 **Lee Thomas Troupe*** (ltroupe@math.uga.edu), Department of Mathematics, University of Georgia, Athens, GA 30602. *The number of prime factors of $s(n)$.*

Let $\omega(n)$ denote the number of distinct prime divisors of a natural number n. In 1917, Hardy and Ramanujan famously proved that the normal order of $\omega(n)$ is $\log\log n$; in other words, a typical natural number n has about $\log\log n$ distinct prime factors. Erdős and Kac later generalized Hardy and Ramanujan's result, showing (roughly speaking) that $\omega(n)$ is normally distributed and thereby giving rise to the field of probabilistic number theory. In this talk, we'll discuss the normal order of $\omega(s(n))$, where $s(n)$ is the usual sum-of-proper-divisors function. This new result supports a conjecture of Erdős, Granville, Pomerance, and Spiro; namely, that if a set of natural numbers has asymptotic density zero, then so does its preimage under s. (Received September 16, 2014)