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**Joshua Zelinsky\*** ([zelinsky@gmail.com](mailto:zelinsky@gmail.com)), 811 Clark Ave, Apt 6, Ames, IA 50010. *On the total number of prime factors of an odd perfect number.*

Let  $N$  be an odd perfect number. Ochem and Rao showed that if  $\omega(N)$  is the number of distinct prime factors of  $N$ , and that  $\Omega(N)$  is the number of prime factors of  $N$  counting multiplicity then  $\Omega(N)$  is at least  $18\omega(N) - 31$ . We discuss improvements of this inequality, as well as related open problems concerning the behavior of cyclotomic polynomials. (Received September 17, 2018)