Zebediah Engberg* (zeb@dartmouth.edu). *On the reciprocal sum of primes dividing Mersenne numbers.*

Let \( f(n) = \sum_{p|2^n-1} 1/p \). Erdős proved that \( f(n) \leq \log \log \log n + C \) for some constant \( C \). Apart from the exact value of \( C \), it is easy to show that this result is best possible. Although it would be more interesting to understand the maximal order of \( \sum_{p|2^n-1} 1 \), the function \( f(n) \) is more tractable, albeit still difficult. In this talk, we consider Erdős’s question on the exact value of the constant \( C \), as well as functions which generalize \( f(n) \). (Received September 11, 2013)