

1086-05-178

Quinn Donahoe*, Department of Mathematics, Pennsylvania State University, State College, PA 16802, and **Jeremy Fehr**, Department of Mathematics, Wesleyan University, Middletown, CT 06459. *Ramsey Numbers $R(C_4, K_n)$, a Survey.*

The Ramsey number $R(C_4, K_n)$ is the smallest number m such that every graph on m vertices contains a C_4 or its complement contains a K_n . We provide an overview of methods that have been proven to be useful in calculating and bounding $R(C_4, K_n)$ for small n . We also summarize the techniques that have been used to prove the best-known bounds on the asymptotic behavior of $R(C_4, K_n)$. This includes our contribution of a constructive lower bound of $\Omega(n^{4/3})$ using a construction from finite geometry. (Received August 03, 2012)