

THE RAMSEY NUMBER FOR THETA GRAPH VERSUS A CLIQUE OF ORDER THREE AND FOUR

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Abstract

For any two graphs F_1 and F_2 , the graph Ramsey number $r(F_1, F_2)$ is the smallest positive integer N with the property that every graph on at least N vertices contains F_1 or its complement contains F_2 as a subgraph. In this paper, we consider the Ramsey numbers for theta-complete graphs. We determine $r(\theta_n, K_m)$ for $m = 2, 3, 4$ and $n > m$. More specifically, we establish that $r(\theta_n, K_m) = (n - 1)(m - 1) + 1$ for $m = 3, 4$ and $n > m$.

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