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Size multipartite Ramsey numbers for stripes versus small cycles

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Abstract

For simple graphs G_1 and G_2 , the size Ramsey multipartite number $m_j(G_1, G_2)$ is defined as the smallest natural number s such that any arbitrary two coloring of the graph $K_{j\times s}$ using the colors red and blue, contains a red G_1 or a blue G_2 as subgraphs. In this paper, we obtain the exact values of the size Ramsey numbers $m_j(nK_2, C_m)$ for $j \ge 2$ and $m \in \{3, 4, 5, 6\}$.

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