

On the Ramsey numbers for linear forest versus some graphs

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Abstract:

For given graphs G and H ; the Ramsey number $R(G;H)$ is the least natural number n such that for every graph F of order n the following condition holds: either F contains G or the complement of F contains H . In this paper firstly, we determine Ramsey number for union of paths with respect to sunflower graphs, For $m \geq 3$, the sunflower graph SF_m is a graph on $2m + 1$ vertices obtained by taking a wheel W_m with hub x , an m -cycle v_1, v_2, \dots, v_m , and additional m vertices w_1, w_2, \dots, w_m , where w_i is joined by edges to $v_i; v_{i+1}$ for $i = 1, 2, \dots, m$, where $i + 1$ is taken modulo m . The hub of W_m is also called the hub of SF_m . Secondly; we determine Ramsey numbers for a combination of a party graph. At the end, we propose some open problems for further work in this area of research.

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