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A NOTE ON THE RAMSEY NUMBER OF EVEN WHEELS VERSUS STARS

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Abstract

For two graphs G_1 and G_2, the *Ramsey number* $R(G_1, G_2)$ is the smallest integer N, such that for any graph on N vertices, either G contains G_1 or $\overline{G}$ contains G_2. Let S_n be a star of order n and W_m be a wheel of order $m+1$. In this paper, we will show $R(W_n, S_n) \leq 5n/2 - 1$, where $n \geq 6$ is even. Also, by using this theorem, we conclude that $R(W_n, S_n) = 5n/2 - 2$ or $5n/2 - 1$, for $n \geq 6$ and even. Finally, we prove that for sufficiently large even n we have $R(W_n, S_n) = 5n/2 - 2$.

Keywords: Ramsey number, star, wheel, weakly pancyclic.

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