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ON DECOMPOSING REGULAR GRAPHS INTO ISOMORPHIC DOUBLE-STARS

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Abstract

A *double-star* is a tree with exactly two vertices of degree greater than 1. If T is a double-star where the two vertices of degree greater than one have degrees k_1+1 and k_2+1, then T is denoted by S_{k_1,k_2}. In this note, we show that every double-star with n edges decomposes every $2n$-regular graph. We also show that the double-star $S_{k,k-1}$ decomposes every $2k$-regular graph that contains a perfect matching.

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