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DEGREE SEQUENCES OF MONOCORE GRAPHS

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Abstract

A k-monocore graph is a graph which has its minimum degree and degeneracy both equal to k. Integer sequences that can be the degree sequence of some k-monocore graph are characterized as follows. A nonincreasing sequence of integers $d_1, \ldots, d_n$ is the degree sequence of some k-monocore graph G, $0 \leq k \leq n-1$, if and only if $k \leq d_i \leq min\{n-1, k+n-i\}$ and $\sum d_i = 2m$, where m satisfies $\lceil \frac{k \cdot n}{2} \rceil \leq m \leq k \cdot n - \binom{k+1}{2}$.

Keywords: monocore graph, degeneracy, degree sequence.

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