

Graph Theory: Lecture No. 29

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Every graph G with $n \geq 3$ and $\kappa(G) \geq \alpha(G)$ has a hamilton cycle.

If G is a graph with n vertices and degrees $d_1 \leq d_2 \leq \dots \leq d_n$ then the n -tuple (d_1, \dots, d_n) is called the degree sequence of G .

An arbitrary integer sequence (a_1, a_2, \dots, a_n) is called Hamiltonian, if every graph with n vertices and a degree sequence pointwise greater than (a_1, a_2, \dots, a_n) is hamiltonian.

An integer sequence (a_1, a_2, \dots, a_n) such that $0 \leq a_1 \leq a_2 \leq \dots \leq a_n < n$ and $n \geq 3$ is hamiltonian if and only if the following holds for every $i < n/2$: $a_i \leq i \rightarrow a_{n-i} \geq n - i$.