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On spanned subgraphs of graphs. (In English)
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[For the entire collection see Zbl 387.00005.]

In this paper, theorems of the following type are proved: Let C be a class of (finite) graphs satisfying certain asymptotic conditions saying that for $G \in C$, both G and its complement $\overline{G}$ are large. Then for all $G \in C$ and all H in some specified class of graphs, H is isomorphic to an induced subgraph of G provided the order of G is large enough compared to the order of H, where the order of a graph is the number of vertices. Examples of two such results are the following. Theorem 1. Let $\delta > 0$ and $C(\delta)$ be the class of graphs G satisfying $\deg_G x \geq (\delta + 1/4)n$ and $\deg_{\overline{G}} \geq (\delta + 1/4)n$ for all $x \in V(G)$, where n is the order of G. Then there are functions $n(\delta)$, $c(\delta)$ such that for all $G \in C(\delta)$ with $|V(G)| > n(\delta)$ and for all $H \in D$ with $|V(H)| \leq c(\delta) \log n$, where D is the class of complete bipartite graphs and their complements, H is isomorphic to an induced subgraph of G. Theorem 2. Let c be a real number, and let C be the class of graphs G such that neither G nor its complement contains a complete graph with at least $c \log n$ vertices, where n is the order of G. Then there is a function $n(c, k)$ such that for all graphs $G \in C$ with at least $n(c, k)$ vertices and for all graphs H of order k, H is isomorphic to an induced subgraph of G.

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