# The extremal function for $K_{9}$ minors 

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#### Abstract

A graph $H$ is a minor of a graph $G$ if $H$ can be obtained from a subgraph of $G$ by contracting edges. We prove that every simple graph on n vertices and at least $7 n-27$ edges either has a $K_{9}$ minor, or is isomorphic to $K_{2,2,2,3,3}$, or is isomorphic to a graph obtained from disjoint copies of $K_{1,2,2,2,2,2}$ by identifying cliques of size six.


