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Kuratowski's theorem

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A finite graph is planar if and only if it contains no subgraph that is isomorphic to or is a subdivision of K_5 or $K_{3,3}$, where K_5 is the complete graph of order 5 and $K_{3,3}$ is the complete bipartite graph with 3 vertices in each of the halves. Wagner's theorem is an equivalent later result.

References

- [1] Kazimierz Kuratowski. Sur le problème des courbes gauches en topologie.
Fund. Math., 15:271–283, 1930.