

Graph Theory: Lecture No. 16

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**Let G be a graph with maximum degree Δ .
Then $\Delta \leq \chi'(G) \leq \Delta + 1$.**

A graph drawn on the plane in such way that no two edges intersect other than at the end points is called a plane graph. Abstract graphs that can be drawn in this way are called planar.

Euler's Formula: Let G be a connected plane graph with n vertices, m edges and ℓ faces. Then $n - m + \ell = 2$.

A plane graph with $n \geq 3$ vertices has at most $3n - 6$ edges.

A planar graph is 6-colorable.