

Name

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1. There exists a planar graph with 13 vertices, 28 edges and 13 faces.	. . .
2. Graph G_1 is planar.	
3. Graph G_2 is planar.	
4. In any planar connected grap, for any 5 of its faces, there are at least two faces not sharing an edge.	

5. Preset algorithm base on "party" to find a perfect matching or show there is no perfect machitng.

Instance: A: 1,2,3,4, B: 1,2,3, C: 1,2,3, D: 1,2,3, E: 4,5, F: 1,6,7, G: 2,6, H: 5,6,8.

6. Let G be a planar graph with twice more vertices that faces. Prove that $\delta(G) \leq 2$.

7. Proof that every triangle-free planar graph is 4-corolable.

8. Find maximal flow and minimal cut in the network: