

## Math 36500: Combinatorics: Practice Final 4

The *average degree* of a graph  $G$  is the average of the degrees of all vertices of the graph,  $A(G)$ .

- (a) Show that if  $G$  is a planar graph, then  $A(G) < 6$ .
- (b) Prove that a bipartite planar graph satisfies  $A(G) < 4$ .