1: Draw K^7 on a torus with no edge crossings.

2: Find a TK^5 or a $TK_{3,3}$ in the Petersen Graph.

3, Diestel 4.4: Show that every planar graph is a union of three forests.

4, Diestel 4.23: A graph is called *outerplanar* if it has a drawing in which every vertex lies on the boundary of the outer face. show that a graph is outerplanar if and only if it contains neither K^4 nor $K_{2,3}$ as a minor.

5: Prove or disprove: Every planar bipartite graph has a vertex of degree at most 3.

6: Show that the complement of any planar graph with 11 or more vertices is not planar. (It has been shown that the above statement is true when 11 is replaced by 9, and there are examples of planar graphs with 8 vertices having planar complement.)