Homework 17: Compactness

Directions. Assignments should be ***stapled****.*

1. §7.1, #7.8, 7.9, 7.13(a).

2. Prove that X is compact if and only if the following condition holds: For every collection $\mathcal{C}$ of closed sets in X whose itersection is empty, there exists a finite subcollection of $\mathcal{C}$ whose intersection is empty.

   Note: You may find it helpful to solve this problem before solving the textbook problems above.