Homework 3, Due Friday February 9.

7.2:

Corrected 7.2.12: *Suppose (X, d) is a metric space and $Y \subset X$. Show that with the subspace metric on Y, if a set $U \subset Y$ is open (in Y) then there exists an open set $V \subset X$ such that $U = V \cap Y$.*

    7.2.13

7.3: 7.3.2, 7.3.3, 7.3.6, 7.3.8, 7.3.11

7.4: 7.4.2, 7.4.3, 7.4.7