MA651 Topology. Homework 7

Homework due March 28, 2006

1. Find the mistakes in the lecture notes (I have intentionally made several mistakes, and you might find even more).

2. Consider the questions given as a homework in the lecture notes (i.e. prove Theorem 42.1, Proposition 37.2, Proposition 38.3, Proposition 39.1)

3. Prove that Q is not locally compact and so, *a fortiori* is not compact. (see section 43.3.3)

4. Find an example of a Cauchy sequence in Q which does not converge in Q. (see section 43.3.4).