

## MA651 Topology. Homework 6

*Homework due March 21, 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 Proposition 37.1, Proposition 37.2, Proposition 38.3, Proposition 39.1)
3. Learn Theorem 41.1 and complete the proof (i.e. prove *v*), *vi*), *vii*), and *viii*).
4. Prove:  $T_0$  and  $T_3$  imply  $T_2$ .