

# Math 500, Homework 3

## General Product Topology

Due at start of class, Thursday, **10/6**

**Reading** Read §19 of Munkres.

### Exercises (to do on your own)

1. Prove that if  $\{X_\alpha\}_{\alpha \in J}$  is a collection of Hausdorff spaces, then  $\prod_{\alpha \in J} X_\alpha$  is Hausdorff in both the product and box topologies.

### Problems (to turn in)

1. Munkres §19, exercise 7.
2. Munkres §19, exercise 8.