

MTH 961: Suggested Exercises for Week 2

1. Do exercises 4.3.8, 4.3.9, 4.3.12, 4.3.17, 4.3.1, 4.3.2, and 4.3.5 in Hatcher.
2. Prove that if X is compact and Y is a metric space, then the compact-open topology on $\text{MAP}(X, Y)$ is the same as the topology defined by the sup metric

$$d(f, g) = \sup_{x \in X} d(f(x), g(x))$$