Munkres Topology: Running Notes

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1 Problems and Solutions

Proposition 1 (Problem 21.7). *Let $f_n : X \to \mathbb{R}$ be a sequence of functions. Let $\bar{\rho}$ be the uniform metric on the function space $\mathbb{R}^X$. This will be defined as:*

$$\bar{\rho}(f, \ g) = \sup\{\bar{d}(f(x), \ g(x)) \mid x \in X\} = \sup\{\min(|f(x) - g(x)|, \ 1) \mid x \in X\}$$