Math 131
Homework 9

Read sections 4.3, 4.4, and 4.5 of Rosenlicht.

1. Suppose that $f : \mathbb{R} \to \mathbb{R}$ is continuous and has the property that for every $\varepsilon > 0$, there is an $M > 0$ such that if $|x| \geqslant M$ then $|f(x)| < \varepsilon$. Prove that f is uniformly continuous.

Also, do problems 13, 14, 21, and 24 on pages 91-93 of Rosenlicht. Note on 14b) the problem should say $\mathbb{R}^n$ instead of E^n.