Exersise 3.7

Given $x_0 \in \mathbb{R}^n$ and any $\epsilon > 0$, let $\delta = \epsilon$. For any $x \in B(x_0, \delta)$ we have $\|x - x_0\| < \delta = \epsilon$. We also have $|f(x) - f(x_0)| = |\|x\| - \|x_0\||$. By the triangle inequality we know $\|x\| - \|x_0\| \leq \|x - x_0\|$. And so $|\|x\| - \|x_0\|| \leq$

Exersise 3.9

Exersise 3.11

Exersise 3.14

Exersise 3.17

Exersise §13, 3

Exersise §13, 4