

**Assignment 8**

1. From the text: 17.8, 17.12, 18.4, 18.8, 18.9, 18.10, 19.1 (a), (d), (e), (f), (g), 19.3, 19.4, 19.5, 19.6, 19.7, 19.9
2. Suppose that  $f : \mathbf{R} \rightarrow \mathbf{R}$  is a function which satisfies the following conditions:  $f$  is continuous on  $\mathbf{R}$ , and  $\lim_{x \rightarrow \pm\infty} f(x) = 0$ . Prove that  $f$  is uniformly continuous on  $\mathbf{R}$ .