1. Let $x \in \mathbb{R}^n$. Show that $\mathbb{R}^n \setminus \{x\}$ is open.

2. Sec. 2.1, problem 3.

3. Sec. 2.1, problem 4.

4. Sec. 2.2, problem 3. Give a proof or a counterexample.

5. P. 144, problem 10a. Give a proof or a counterexample.

6. Let $A$ be a subset of $\mathbb{R}^n$. Prove that Int$(A)$ is open.