MA 426-001/591M-001 Homework

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Assigned January 17, 2003, Due January 24, 2003

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 $\mathrm{Int}(A)$ is open.