

Homework 4 (due Wed/Thur, Sep 26/27)

1. Let $x \in \mathbb{R}$. Prove that if $-2 < x < 4$, then $x^2 + 2x + 4 \geq 3$.
2. Let $n \in \mathbb{Z}$. Prove that if $n^2 - 2n + 5 \leq 3$, then n is even.
3. Prove that if n is an integer, then $2n^2 - 8n + 10$ is an even integer.

Also do exercises 3.2, 3.4, 3.6, and 3.8 in the book.