

# Math 250, Homework 8, Due 04/15/05

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**Problem 0** Do the following problems from the book:

Section 5.3 : 6, 8, 18, 19, 28, 34, 43, 58, 59; Section 6.1 : 17, 25, 42, 44, 47, 49, 51, 52;

Section 6.2 : 9, 12, 19, 22, 26, 31, 32, 34, 36, 39, 40.

**Problem 1** Show that  $(a_1 + a_2 + \dots + a_n)^2 \leq n(a_1^2 + a_2^2 + \dots + a_n^2)$ , for  $a_i \in \mathbb{R}$ .