

CS 525 - Spring 2009 - Homework 11

assigned 4/23/09 - due 5/1/09

1. Write down Q , p , and α (with Q symmetric) to express the following quadratic in the form $(1/2)x'Qx + p'x + \alpha$:

$$x_1 - x_2 + 7x_1^2 - 4x_1x_2 + x_2^2 - 2x_2x_3 + 4x_1x_3 + 4x_3^2.$$

2. Consider the quadratic program in standard form (formulation (7.7) in the text) with *positive definite* Hessian Q . Show that it cannot be unbounded below.
3. Do Exercise 7-4-5.