Assignment #3

Due: by 4pm, Mar. 17, in MNO C211 (lecture). Late entries will not be accepted. Only hard copies, no email submissions.

Reading: Chapter 4 of the course textbook (S. Boyd, L. Vandenberghe, Convex Optimization, Cambridge University Press, 2004). Study carefully all examples, make sure you understand them and can repeat them with the book closed. You are encouraged to at least read all end-of-chapter problems and attempt to solve more than actually asked below. Remember the learning efficiency pyramid!

1) Problem 4.1. Additionally, indicate supporting hyperplane in each case.
2) Problem 4.6.
3) Problem 4.8 (a)-(d).
4) Problem 4.11 (a) (b).
5) Problem 4.21.
6) Problem 4.28.
7) Problem 4.33 (a), (b).
8) Problem 4.43.
9) Problem 4.50. For (d)-(f), sketch the solutions on the graph.
10) Problem 4.57.

Please give your solutions in the order indicated above!

Please include in your solutions all the intermediate results and their numerical values (if applicable). Detailed solutions are required, not just the final answers.

Make sure your handwriting is readable, otherwise it will be ignored. Staple the sheets.

Plagiarism (i.e. “cut-and-paste” from a student to a student, other forms of “borrowing” the material for the assignment) is absolutely unacceptable and will be penalized. Each student is expected to submit his own solutions. If two (or more) identical or almost identical sets of solutions are found, each student involved receives 0 (zero) for that particular assignment. If this happens twice, the students involved receive 0 (zero) for the entire assignment component of the course in the marking scheme and the case will be send to the Dean’s office for further investigation.