Continuous Optimisation: Chpt 4 Exercises

December 4, 2015

1. Prove Lemma 4.6.


3. Show that the optimal value to (Q) on slide 13/19 of lecture 4 is equal to the optimal value to the following problem:

\[
\min_X \{ \langle A, X \rangle \mid \langle E, X \rangle = 1, \; X \in \mathcal{CP}^n \}.
\]  

(C)

4. Show that an outer approximation of \( \mathcal{CP}^n \) would provide a lower bound on val(6) from slide 11/19 of lecture 4.

5. Show that an inner approximation of \( \mathcal{CP}^n \) would provide an upper bound on val(6) from slide 11/19 of lecture 4.