

## Homework 7

*Assigned: 04/07/2020**Due: 04/20/2020*

**Homework must be L<sup>A</sup>T<sub>E</sub>X'd or it will not be graded. Make sure to rigorously justify *all of your answers!***

**Problems from Boyd & Vandenberghe:** 6.3, 6.9, 7.3, 7.5, 8.15, 8.24, 9.1, 9.7

**Problems from additional exercises**

[https://web.stanford.edu/~boyd/cvxbook/bv\\_cvxbook\\_extra\\_exercises.pdf](https://web.stanford.edu/~boyd/cvxbook/bv_cvxbook_extra_exercises.pdf): A5.2, A6.4

You will need data files for some of these exercises, which can be downloaded here:

[https://web.stanford.edu/~boyd/cvxbook/cvxbook\\_additional\\_exercises/](https://web.stanford.edu/~boyd/cvxbook/cvxbook_additional_exercises/)

**Extra problem bonus questions:** These bonus questions are completely optional. These are problems that would have normally been assigned as homework problems, but are now being added as additional problems for those of you who would like to attempt them. An extra 0.5 marks can be earned by successfully completing them.

1. Problems 6.8 and 7.4 from B&V
2. Problem A7.4 from additional exercises.

**“Standard” bonus questions:** These are the previous standard bonus questions, and are again completely optional. If a certain threshold of correctness is exceeded, you will earn an additional 0.5 marks on your assignment grade. These are fun, challenging problems, and we ask that you try your best to get as far into the proofs/answers as you can *without consulting outside sources!* Once you get stuck, indicate the point at which you were stuck in your solutions with a “**I made it this far on my own,**” after which, you should indicate what outside source you consulted in order to finish the problem, in accordance with the Penn Academic Integrity policy.

1. Problems A6.5 and A7.10 from additional exercises.