

Homework 1

*Assigned: 01/23/2024**Due: 02/09/2024***Homework must be \LaTeX 'd or it will not be graded.**

You are expected to provide complete and rigorous solutions to all questions. Do not leave portions of your solutions as “exercises for the grader.”

Problems from Boyd & Vandenberghe: 2.7, 2.14, 2.15 (a,c,e,g,i), 2.25, 2.31

Problems from additional exercises

https://github.com/cvxgrp/cvxbook_additional_exercises : A2.7

Problems from Boyd & Vandenberghe: 3.3, 3.8, 3.14

Bonus questions: Bonus questions are completely optional. If a certain threshold of correctness is exceeded, you will earn up to an additional 2 marks per question 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 any 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. Additional Exercise A2.5