

## Homework 6

1. Exercise A4.33.
2. Exercise T5.18.
3. Exercise A4.32. Also explain how the answers change if the Euclidean norm in the first constraint is replaced by the  $\ell_1$ -norm, *i.e.*, for the problem

$$\begin{array}{ll}\text{minimize} & x_1 \\ \text{subject to} & |x_1| + |x_2| \leq x_2 \\ & -x_1 \leq 1.\end{array}$$

4. Exercise A4.14.
5. Exercise A4.22.
6. Exercise T5.29.