

2MA918 Laboration I

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1 Exercise 1: Warm-up LP-problem

- i) Define the model
- ii) Restricted convex set region
- iii) Study the figure of ii)
- iv) Adding level curves to convex hull plot
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- vi) Find the maximum
- vii) Problem in *standard form*

2 Exercise 2: Large LP-problems

- i) Matrix and vectors solution, why?
- ii) Solving example with simplex
- iii) Get simplex average time exceeds 1 second
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3 Exercise 3: Sensitivity analysis

- i) Solve the dual problem and verify
- ii) Shadow price of various constraints
- iii) 100 extra working hours
- iv) Price increase to change optimal solution
- v) New TV, should be produced or not?
- vi) Quality inspection working time increase