

# Assignment 1 - Manual calculation / Mathematical modelling

→ objective function:

$$\text{Maximize } 50x + 120y$$

→ subjected to:

$$\text{Inequality constraint: } 10x + 30y \leq 1200$$

$$\text{Inequality constraint: } 7000x + 2000y \leq 700000$$

$$\text{Inequality constraint: } x + y \leq 110$$

$$\text{Boundaries: } x, y \geq 0$$

→ objective function matrix:  $[-50, -120]$

Ineq. constraints coeff. matrix:  $[[10, 30], [7000, 2000], [1, 1]]$

ineq. constraints constants:  $[1200, 700000, 110]$