Solution Let

\[ x_1 = \text{money invested in stocks} \]
\[ x_2 = \text{money invested in loans} \]

Objective:

- \( \text{max } 10x_1 + 15x_2 \)

Constraints:

- \( x_1, x_2 \geq 0 \).
- \( x_1 + x_2 \leq 1000 \) (at most 1000 $ can be invested).
- \( x_1 \geq 0.3(x_1 + x_2) \Leftrightarrow 0.7x_1 \geq 0.3x_2 \) (at least 30 % of the money invested must be in stocks).
- \( x_2 \geq 400 \) (at least 400 $ of the money invested must be in loans).

Remark: Since we can assume that all money is invested, the third constraint can be replaced by

- \( x_1 \geq 300 \).