

Variables

$x_1 \in [0, \infty[$ The amount of Kisfroccs we sell

$x_2 \in [0, \infty[$ The amount of Nagyfroccs we sell

$x_3 \in [0, \infty[$ The amount of Hosszulepes we sell

Constraints

This equation enforces that we don't use more than 100 l of wine.

$$0.1 \cdot x_1 + 0.2 \cdot x_2 + 0.1 \cdot x_3 \leq 100$$

This is a similar constraint that limits the usage of carbonated water to 150l.

$$0.1 \cdot x_1 + 0.1 \cdot x_2 + 0.2 \cdot x_3 \leq 150$$

Objective

The objective is to maximize the profit, with 120, 210, and 140 HUF of a price for a portion of Kisfroccs, Nagyfroccs, Hosszulepes, respectively.

$$120 \cdot x_1 + 210 \cdot x_2 + 140 \cdot x_3 \rightarrow \max$$