In a bakery (v2)

Difficulty level: beginner

Keywords

- Production
- Linear Programming
- Graphical method
- Python+PuLP

Problem description

Every morning, a baker makes some Genovese focaccia and some classic Margherita pizza. A kilogram of pizza requires 25 minutes and 15 minutes for the dough to be prepared and baked, respectively. On the contrary, 20 minutes of preparation and 35 minutes of baking, respectively, are needed to produce a kilogram of focaccia. Since the baker also has to prepare other products, he cannot spend more than 3 and 4 hours preparing the doughs and baking them, respectively. Assume that the baker is able to sell all the quantities of focaccia and pizza he makes. The selling prices for the focaccia and the pizza are 6 €/Kg and 8 €/Kg, respectively.

Tasks

1. Identify the variables, the constraints, and the objective function of the problem.
2. What is the most profitable daily production?
3. Implement the mathematical model in Python and solve it by exploiting the PuLP library.