In a pastry during Easter

Difficulty level: beginner

Keywords

- Production
- Linear Programming
- Graphical method

Problem description

The Turin pastry shop "A Little of Cocoa" produces Easter doves and chocolate lambs. Due to production needs, it has to satisfy the following constraints:

- the triple of the number of doves plus the number of chocolate lambs must not be less the 750;

- the double of the number of doves plus the triple of the number of lambs must not be less than 850;

- the difference between the number of doves and the number of chocolate lambs must not exceed 500;

- the number of chocolate lambs must not exceed 900.

Knowing that the unit selling costs for each dove and each chocolate lamb are 1.50 euro and 2.40 euro, respectively, how many pastries of each kind has the pastry shop to produce, in order to maximize its revenue?

Tasks

1. Formulate the problem by applying Linear Programming.

2. Compute an optimal solution by using the graphical method.