Bakery in 2023

Hotel "EURO" has its own bakery, which satisfies both the hotel's needs with its products and supplies the surrounding shops with fresh baked goods. The management of the bakery analyzed the management of the pastry factory for the past year and found that the least amount of pastry was produced in the month of February (128,600 pieces) and, on the contrary, the highest production was recorded in the month of October, when the total costs amounted to CZK 660,500. The bakery sells its products at an average price of 4 CZK/piece. The bakery's economic department derived a cost function for the monthly calculation of the bakery's costs in the form of N = 2.5 Q + 206,800. (Q quantity of bread in pieces)

Specify:

1. the economic result (total profit) of the bakery's operations in the month of February,

2. the highest production value achieved in the month of October,

3. the economic result (total profit) for the month of October

4. turning point per year in pcs

For the entire year 2022, the hotel produced and sold a total of 1,980,000 pieces of pastry. Calculate the economic result (total profit) for the year 2022.

Bakery in 2024

In the month of January this year, taking into account the increased input costs, the bakery determined the monthly cost function N= 3.5 Q + 295,000. By what percentage will the number of pieces of bread produced increase at the break-even point, if the bakery decided to increase the average price to 5.50 CZK/pc?