

Table: Overview of monthly production and total costs in the company "ABC s.r.o." for year 2023. Determine the annual and monthly cost function.

<i>period</i>	<i>Amount of production [ pcs ]</i>	<i>Total costs [ thousand CZK ]</i>
January	6,224	6,967
February	8,460	7,776
March	10,408	8,002
April	12,623	8,687
May	11,976	8,539
June	4,872	7,261
July	6,380	6,989
August	8,708	7,512
September	7,452	7,138
October	8,629	7,598
November	11,402	8,621
December	11,237	9,378
TOTAL	108,371	94,468

From the documents of the company "XYZ" the following information was obtained for the quarterly period:

- The total costs amount to CZK 10,855,500
- The variable cost is 850 CZK/pc
- The price of the product is 1,600 CZK/pc
- A total of 7,830 units were produced and sold

1. *Determine the amount of fixed costs.*
2. *Find out the sales for this period.*
3. *What is the economic result for the given period?*
4. *Determine the cost function for the monthly period.*

The manufacturing company produces 1 type of product. In the monitored period, a total of 35,000 units were produced (and sold) and the total cost of producing this amount amounted to CZK 13,328,000. In the following year, the production volume increased by 10% and the total costs rose to CZK 14,460,800.

1. Determine the cost function.
2. Determine the production volume that will ensure the break-even point is reached if the price is CZK 900/piece.

The company produces keyboards for computers and only in one variant. From our own records, it was found that the variable costs related to the production of one keyboard amount to CZK 1,000. Fixed costs determined from accounting are set at CZK 190,000 per month. The company sells one keyboard for CZK 2,990. In the given period (per year), the company produced 5,000 keyboards and sold all of this production.

- 1. Calculate the economic result of the business.*
- 2. Determine at what production volume the company will break even.*
- 3. Determine the volume of production that will ensure a profit of 5,500,000 per year.*

The company manufactures and sells pitchforks. Annually, the company produces 40,000 forks with a total variable cost of CZK 2,320,000. Fixed production costs amount to CZK 1,455,000/year and the price of forks is calculated at CZK 120/piece.

1. *Determine the cost function.*
2. *Calculate the production value at which the break-even point is reached.*
3. *Calculate the economic result for the production of 40,000 forks.*