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COSTs

Cost analysis; Cost classification; Cost according the volume of providing outputs; Production theory

TASK 1 Fixed vs variable

- Last year composition of the costs of the company:
- Material consumption   1 000 000,- Kč
- Workers' wages   200 000,- Kč
- Administrative workers' wages   50 000,- Kč
- Rental of the building   400 000,- Kč
- Energy for the machines   100 000,- Kč
- Lightning, heating, water   50 000,- Kč
- Advertisement   60 000,- Kč
- Material inbound logistics (supply)   80 000,- Kč
- Depreciation   140 000,- Kč

- There were 1500 pieces of product.
- Calculate unit variable costs and write down the cost function.

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Task 2 cost function derivation (2 seasons)

- The company achieved following volumes of production and cost in two following years.

Year	Production volume(CZK)	Total costs(CZK)
2015	30 000	60 000
2016	45 000	81 000
2017	50 000	???????

- Derive cost function and calculate total costs for the planned next year production volume of 50 000 pieces. (ignore price changes and inflation).

Task 3 Experience curve

– An ACME company started produxtion of newly developer machine by start of this year. An estimation is to produce 20 000 units this year with average unit costs 50 USD. For following year the production keeps same volume.

– Experience curve is Cu = 70 – 0,001 Q, where Cu is unit cost, Q is produced quantity.

– What is the estimated unit cost in the end of next year?

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Task 4 Technology

- The entrepreneur decided to expand production with a new type of product that he could sell for €700. He has the option to use three mutually exclusive variants of the production technology (A, B, C). Option A has annual fixed costs of €40 000 and variable costs of €500/unit, Option B has annual fixed costs of €20 000/unit and variable costs of €1 000/unit, Option C has annual fixed costs of €60 000 and variable costs of €300/unit. It will be possible to place 100 units of these products on the market.

- Task: Recommend to the entrepreneur which variant of production technology to choose.

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