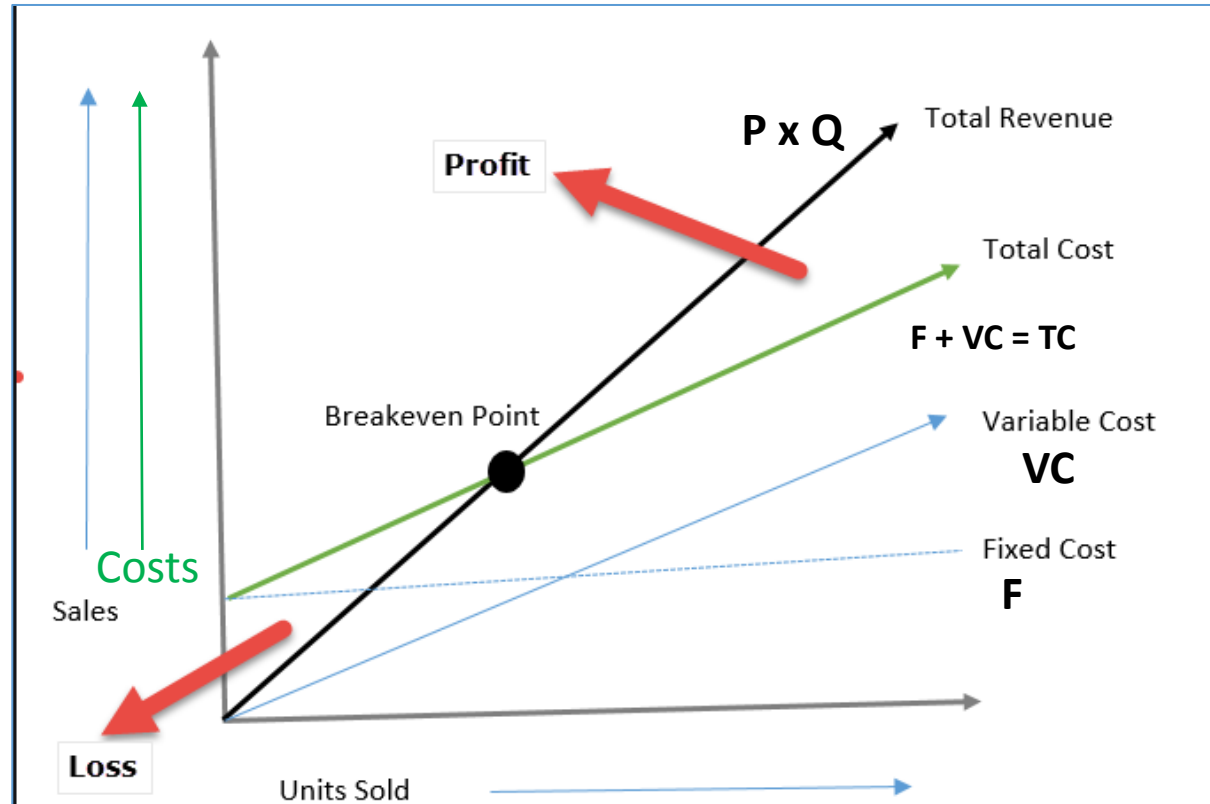


# Break-even point analysis

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# Graphical representation

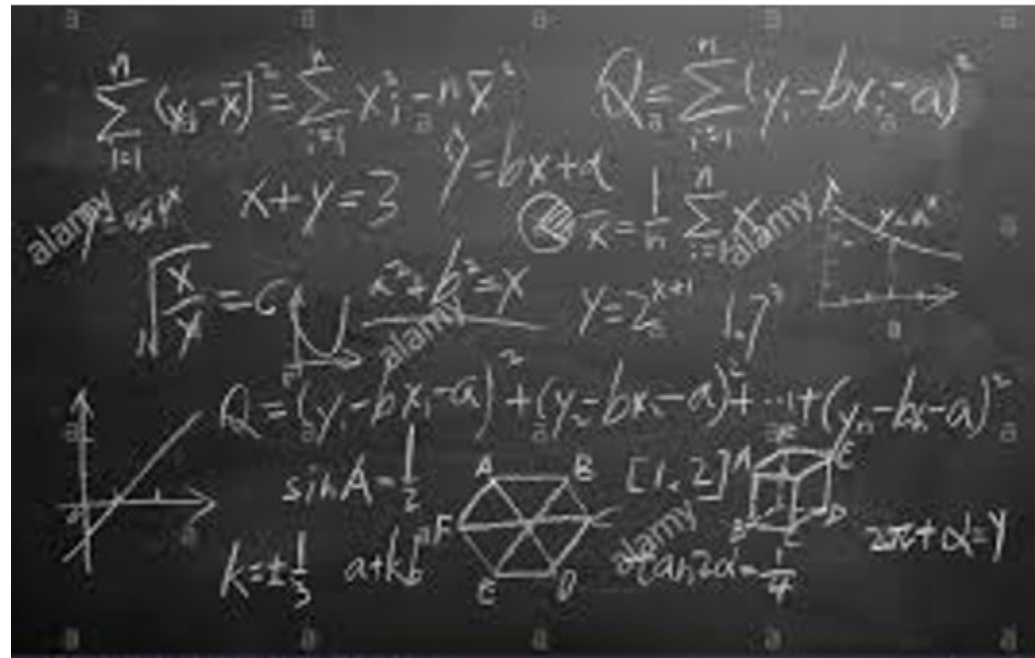


# BEP- Basic Statements

- Break-Even Point is the amount of product at which total costs are equal to total returns. From this point, the company or project begins to generate profit.
- In its classic form, the break-even point tells you how much product to sell to generate profit. It is a volume indicator.
- The break-even point in corresponding currency thus basically means 0.
- In the next slides, we present a formula where it is also possible to incorporate the required rate of profit (in corresponding currency) into the calculation.
- As a result, we will shift to the right along the X-axis (sales volume) in the graph, and the resulting Q (X pieces) will be higher than at the "classic" break-even point, where the profit is zero.

# Calculation I

- The basic calculation of the **break-even point** is not complicated. All you have to do is put together the Price, Costs and possibly the Required profit.
- However, the challenge is to get to these aggregated variables. The data for partial calculations are obtained utilizing financial analysis, using data from accounting. Good financial management considers the break-even point analysis to be an absolute must. It is not just a “lesson from microeconomics” or “theoretical exercise”



# Calculation II

**Profit** = Price x Sold Products - Total Costs  
Total Costs = F+VCxQ

Profit = P x Q - F - VC x Q

If BEP then Profit=0

Profit = Q x (P-VC) - F = 0

Q= F/(P-VC)

VC- cost for one product unit

F=Fixed costs

VC= Variable costs

# Simple example



- What is the turning point in practice can be shown in a model example?
- Let's imagine that you want to start confectionery production. How do you know how many cakes you have to sell to make a profit?

- Real capacity consideration
- Price conditions analysis
- List of all costs
- Calculations and modeling

$$Q = F / (P - VC)$$

$$\text{BEP} = 555 \text{ cakes [calculation: } 250.000 / (750 - 300)\text{].}$$

Let's assume that the total input costs (fixed costs) will be 250,000 CZK.

Set the selling price of the cake at 750, - CZK

Variable costs for 1 cake = 300, - CZK

CZK=Czech Crown

BEP=Break-Even-Point

