

Product Launch course

Year 2

This week:

- Calculations**
- Test exam 1: Questions 5,7,m.c.**

Pie costs \$ 30,00

I sell 10 pieces

1. How much must I ask so I do not lose money?
(= break even)

2. If I sell each part for \$2,00.
How many pieces should I sell not to lose money?
(= break even)



Pie costs \$ 20,00

I want to earn \$ 5,00 with the sales of the whole pie

I cut 25 pieces

3. How much should I charge per piece not to lose money? (= break even)

4. How much is my total sales? (= break even sales)

Pie costs \$ 30,00

I sell 10 pieces

1. How much must I ask so I do not lose money?

(= break even)

$$\text{\$ } 30 / 10 = \text{\$ } 3,00$$

2. If I sell each part for \$ \$2. how many pieces should I sell not to lose money?

(= break even?)

$$\text{\$ } 30,00 / \text{\$ } 2,00 = 15 \text{ pieces}$$

Pie costs \$ 20,00

I want to earn \$ 5,00 with the sales of the whole pie

I cut 25 pieces

3. How much should I charge per piece not to lose money? (= break even)

$$\text{Costs: } \text{\$ } 20,00 + \text{\$ } 5,00 = \text{\$ } 25,00$$

$$\text{Cost per piece: } \text{\$ } 25,00 / 25 = \text{\$ } 1,00$$

4. How much is my total sales? (= break even sales)

$$25 \text{ pieces} \times \text{\$ } 1,00 = \text{\$ } 25,00$$



Pie costs \$ 20

I want to earn \$ 5 with the sales of the whole pie

The delivery cost for each piece is \$ 1,50

I cut 20 pieces



5. How much should I charge per piece? (= break even)

6. How much is my total sales (= break even sales with profit)

Pie costs \$ 20

I want to earn \$ 5 with the sales of the whole pie

I deliver each piece for \$ 1,50

I cut 20 pieces



5. How much should I charge per piece? (= break even)

Constant costs = \$ 20,00 + \$ 5,00 = \$ 25,00

Per piece = \$ 25,00 / 20 = \$ 1,25

Variable costs = \$ 1,50 per piece

Total cost per piece = \$ 1,25 (const.) + \$ 1,50 (delivery) = \$ 2,75

6. How much is my total sales (= break even sales with profit)

20 pieces X \$ 2,75 per piece = \$ 55,00

I would like to invest in a new pie.

I buy it for \$ 12,00

My gross margin is 50% of the sales revenue

The variable costs are 25% of the sales revenue.

(gross margin = revenue – cost to obtain the product)

7. What is my break-even sales revenue?



I would like to invest in a new pie.
 I buy it for \$ 12,00
 My gross margin is 50% of the sales revenue
 The variable costs are 25% of the sales revenue.



7. What is my break-even sales revenue?

Gross margin = 50% □ cost to Obtain product = 100 – 50% = 50%

$$\begin{array}{rcl}
 \text{B.E. sales} & = & \$ 12,00 / (100\% - (50\% + 25\%)) \quad \times 100\% \quad = \\
 & & \$ 12,00 / (100\% - (75\%)) \quad \times 100\% \quad = \\
 & & \$ 12,00 / \quad \quad \quad 25\% \quad \times 100\% \quad = \\
 & & \$ 48,00
 \end{array}$$

Percentage and break-even.

Break even turnover/sales/sales revenue is **money**

Break even volume is in **amount** (numbers, liters, kilograms, etc.)

- Break even sales = amount * selling price
- B.E. volume = B.E. sales / selling price
- B.E. amount = constant costs / (selling price- variable costs per product)

To be break even:

A. My sales total \$ 10.000
I ask per product \$ 20

B. Constant cost are \$ 250
Selling price \$ 15
Variable cost pp \$ 10

What is my break even volume?

Break even Sales?
What is contribution margin?

To be break even:

A. My sales total \$ 10.000
I ask per product \$ 20

B. Constant cost are \$ 250
Selling price \$ 15
Variable cost pp \$ 10

What is my break even volume?

$$\text{\$ } 10.000 / \text{\$ } 20 = 500$$

Break even Sales?

$$\text{\$ } 250 / (\text{\$ } 15 - \text{\$ } 10) = 50$$

$$50 \times 15 = \text{\$ } 750$$

What is contribution margin?

$$\text{\$ } 15 - \text{\$ } 10 = \text{\$ } 5$$

$$\text{Breakeven sales volume (BEV)} = \frac{\text{Total Constant costs}}{\text{Contribution Margin (CM)}}$$

$$\text{Contribution Margin (CM)} = \text{Sales revenue} - \text{variable costs}$$

$$\text{B.E. volume with profit} = \frac{\text{(Constant cost + profit)}}{\text{(selling price-variable cost per product)}}$$

To be break even:

A. Total costs \$ 20.000
 I ask per product \$ 40

What is my break even volume?

B. Constant cost are \$ 500
 Selling price \$ 30
 Variable cost pp \$ 20

Break even Sales?

To be break even:

A. Total costs \$ 37.500
 I sell product at \$ 17,50

What is my break even volume?

B. Constant cost are \$ 2 mln
 Selling price \$ 1,50
 Variable cost pp \$ 0,25

Break even Sales?

To be break even:

A. Total costs \$ 20.000
I ask per product \$ 40

What is my break even volume?

$$\text{\$ } 20.000 / \text{\$ } 40 = 500$$

To be break even:

A. Total costs \$ 37.500
I sell product at \$ 17,50

What is my break even volume?

$$\text{\$ } 37.500 / \text{\$ } 17,50 = 2.143$$

B. Constant cost are \$ 500
Selling price \$ 30
Variable cost pp \$ 20

Break even Sales?

$$\text{\$ } 500 / (\text{\$ } 30 - \text{\$ } 20) = 50$$

$$50 \times \text{\$ } 30 = \text{\$ } 1.500$$

B. Constant cost are \$ 2 mln
Selling price \$ 1,50
Variable cost pp \$ 0,25

Break even Sales?

$$\text{\$ } 2.000.000 / (\text{\$ } 1,50 - \text{\$ } 0,25) =$$

$$1.600.000 \times \text{\$ } 1,50 = \text{\$ } 2,4 \text{ mln}$$

Robert Inc. would like to invest in a new accessory product.
I plan my constant costs for US\$ 12.000 for the next year, the gross margin for 50% of the sales revenue and the other variable costs 25% of the sales revenue.

1. What is the break-even sales revenue for Robert Inc. for the next year?
2. What is the break-even volume for Robert Inc., if I know that my average selling price will be \$ 5 pounds per product?
3. What is the break-even volume for Robert Inc. if I would like to make a profit of \$ 50.000?

Robert Inc. would like to invest in a new accessory product.
 I plan my constant costs for US\$ 12.000 for the next year, the gross margin for 50% of the sales revenue and the other variable costs 25% of the sales revenue.

What is the break-even sales revenue for Robert Inc. for the next year?

$$\begin{aligned}
 \text{B.E. Sales} &= \text{Const. costs} / \text{selling price} - \text{variable costs p. product} = \\
 &12.000 / (100\% - (50\% + 25\%)) \times 100\% = \\
 &12.000 / 25\% \times 100\% = \\
 &\$ 48.000
 \end{aligned}$$

What is the break-even volume for Robert Inc., if I know that my average selling price will be \$ 5 pounds per product?

$$\begin{aligned}
 \text{B.E. Volume} &= \text{B.E. sales} / \text{selling price} \\
 &48.000 / 5 = 9.600 \text{ products}
 \end{aligned}$$

3. What is the break-even volume for Robert Inc. if I would like to make a profit of \$ 50.000?

$$\begin{aligned}
 \text{B.E. volume with profit} &= \text{Const. costs} + \text{profit} / (\text{selling price} - \text{v.c.p.p}) \\
 &\$ 12.000 + \$ 50.000 / (25\%) \times 100\% \\
 &\text{Total Sales } \$ 248.000 / \$ 5 = 49.600 \text{ products}
 \end{aligned}$$

XYZ would like to invest in a new awesome product line. With 3 billion customers around the world ready to use their product they want to launch in January 2018. With a selling price of only \$ 0,50 the product is accessible to everyone.

They estimate the total costs at \$ 4.500.000, including machinery, housing, etc.

The variable costs are estimated at 10% of the total costs. In the variable costs packaging is a major cost and electricity hardly.

The company wants to be break even in the first year and earn a profit of \$ 2 mln in the second year.

1. Calculate the contribution margin

2. What is the break-even sales revenue for XYZ in the first year? How many product do they have to sell?

3. How many products do they have to sell in the second year?

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The company wants to be break even in the first year and earn a profit of \$ 2 mln in the second year.

1. Calculate the contribution margin

Total costs – var. costs = 100 – 10 = 90%

Contribution margin = 90% of \$ 0,50 = \$ 0,45

2. What is the break-even sales revenue for XYZ in the first year? **How many product do they have to sell?**

Break even □ cost = sales

First year:

Total costs 4.500.000 = break even sales revenue

Number of products to sell \$ 4.500.000 / \$ 0,50 = 9.000.000 products

Or

Const cost/contr. Margin = (90% of \$ 4.500.000) / \$ 0,45 = 9.000.000 products

Break even sales: 9.000.000 X \$ 0,50 = \$ 4.500.000

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They estimate the total costs at \$ 4.500.000, including machinery, housing, etc.

The variable costs are estimated at 10% of the total costs. In the variable costs packaging is a major cost and electricity hardly.

The company wants to be break even in the first year and earn a profit of \$ 2 mln in the second year.

3. How many products do they have to sell in the second year?

Second year:

Total constant costs:

$$\text{constant costs} + \text{profit} = (\$ 4.500.000 \times 90\%) + \$ 2.000.000 = \$ 6.050.000$$

$$\text{Contribution margin} = \$ 0,45$$

Total sales:

$$\text{Total constant costs} / \text{contribution margin} = \$ 6.050.000 / \$ 0,45 = 13.444,445$$

1. The selling price for Uggs boots is € 249,-. The constant costs are € 99,- per pair while the variable costs are € 16,- .
The total constant costs for the trader are € 1.072.000,-
 - a. Calculate breakeven volume.
 - b. Calculate breakeven sales.

2. A Supplier has a selling price of € 45,- per product. His constant costs are 900.000,-. His variable costs are € 25,- per product. Calculate breakeven sales.

1. a. contribution margin:

Cost. costs 1.072.000,- / (selling price 249,- minus 99,- minus var co. 16,-) = **8.000 pieces**

b. 8.000 stuks * vp 249,- = break even sales **1.992.000,-**

2. 900.000,- / (45,- min 25,-) = 900.000,- / 20,- =

45.000 pieces * selling price 45,- = **2.025.000,- break even sales**

Questions 5, 7 and MC test exam

5a. What is the break-even sales revenue for FashionEsta.com for the next year?

5b. What is the break-even volume for FashionEsta.com, if they know that their average selling price will be 50 pounds per product?

5c. What is the break-even volume for FashionEsta.com if they would like to make a profit of 40.000 Pounds?

Constant costs for 60.000 pounds for the next year

The gross margin for 60% of the sales revenue

The other variable costs 30% of the sales revenue.

Questions 5, 7 and MC test exam

5a. What is the break-even sales revenue for FashionEsta.com for the next year? (5 points)

ANSWER:

COST TO OBTAIN PRODUCT = 100% - 60% = 40%

**B.E. sales = C/ selling price- variable costs p. product =
60.000/ 100%-(40%+30%) X 100% =
60.000/ 30% X100%= 200.000 Pounds**

5b. What is the break-even volume for FashionEsta.com, if they know that their average selling price will be 50 pounds per product? (5 points)

B.E. volume = B.E. sales / selling price= 200.000/ 50 = 4.000 products

5c. What is the break-even volume for FashionEsta.com if they would like to make a profit of 40.000 Pounds? (5 points)

**B.E. volume met profit = C+ profit/ selling price-v.c.p.p =
(60.000+ 40.000)/ 30%X 100% =
333.333 pounds/50 pounds= 6.667 products**

QUESTION 7 (20 points)

FashionEsta.com is considering tablets (I-Pad for example) for inclusion in their media mix. Which two adopter categories would be most likely to start using this medium?

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Adopter category 1:

Innovators

- the first individuals to adopt an innovation
- willing to take risks
- youngest in age
- highest social class

Adopter category 2:

Early adopters:

- high degree of opinion leadership
- typically younger in age
- relatively high social status
- financial resources

Question 1:

_____ is the act of occupying a distinctive place in the mind of the target market. (10 points for the correct answer)

- targeting
- positioning
- segmenting
- branding

Question 2:

The _____ stage is marked by a rapid climb in sales.

- introduction
- growth
- maturity
- decline

Question 3:

During the _____ stage sales slow down creating over-capacity in the industry, which leads to intensified competition.

- introduction
- growth
- maturity
- decline

Question 4:

During the _____ stage sales and profits decline and some firms withdraw from the market.

- introduction
- growth
- maturity
- decline

Question 5:

A company may follow the strategies of deletion, harvesting, or contracting in the _____ stage.

- introduction
- growth
- maturity
- decline

Next week

- Abell
- Marketing Communication
- Wrap up

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