

Finance: Breakeven

MULTIPLE CHOICE QUESTIONS

1. Which one of the following is a fixed cost for a Sandwich Bar?

- a. Baguettes
- b. Wages
- c. Rent
- d. Cup carriers



2. Which one of the following costs for a dog groomer is variable?

- a. Shampoo
- b. Advertising
- c. Insurance
- d. Salaries



3. Which of the following calculations would you use to find Total Sales Revenue?

- a. Total Sales x Fixed Costs
- b. Selling Price x Quantity Sold
- c. Variable Costs + Fixed Costs

4. Which of the following calculations would you use to find Total Costs?

- a. Fixed Costs + Variable Costs
- b. Selling Price – Fixed Costs
- c. Total Fixed Costs / Selling Price – Variable Cost

5. How would you calculate Break Even?

- a. Selling Price x Quantity Sold
- b. Total Fixed Costs/Variable Cost Per Item
- c. Total Sales Revenue - Total Fixed Costs
- d. Total Fixed Costs / Selling Price-Variable Cost Per Item

6. If a pop-up candle shop has fixed costs of £2000, a variable cost of £5 per unit and they are selling their latest product for £10, what is the breakeven level of output?

- a. 40
- b. 200
- c. 400
- d. They will not reach breakeven



7. If a business has fixed costs of £5000, a variable cost of £5 per unit and they are selling the product for £15, what is the breakeven level of output?

- a. 5000
- b. 500
- c. 100
- d. 333

8. Bea and Poppy have created a new computer game, which they plan to sell through the internet. Their total fixed costs are £11,400 per year. They plan to sell the games at £25.00 each. The variable cost per unit is £13.00. What is the breakeven point?

9. Jack and James are selling personalised t-shirts. Their fixed costs total £5,000, their selling price is £9.99 and the variable cost per t-shirt is 4.99. What is the breakeven point?



10. You are a sole trader selling pies at music festivals. On an average day you sell an average of 500 pies. You sell the pies for £2 each. Your pitch at the event costs you £300 per day; you then need to pay insurance of £50, and utilities of £10 per day. The cost of pastry and filling per pie come to 50p.

- a. Decide which of these costs are fixed and which are variable.

Fixed costs

Variable costs

- b. Work out how much profit or loss you will make per day.



11. Cei Ltd estimates the costs and revenue for next month will be:

Selling Price	£10 per unit
Variable Cost	£5 per Unit
Fixed costs for the month	£7,500
Maximum Output is 3,000 units per month	

Complete the following table. How many units do they need to produce to breakeven?

Units of Output	Fixed Costs	Variable Costs	Total Cost	Sales Revenue	Profit/(Loss)
	£	£	£	£	£
0					
500					
1,000					
1,500					
2,000					
2,500					
3,000					

How many units do they need to sell to breakeven?

Ext: Try drawing a breakeven graph for Cei Ltd.

Ext: How much profit do Cei Ltd make at 4,500 products? How about £10,200 products?

Answers

MULTIPLE CHOICE QUESTIONS

1. Which one of the following is a fixed cost for a Sandwich Bar?

- a. Baguettes
- b. Wages
- c. **Rent**
- d. Cup carriers



2. Which one of the following costs for a dog groomer is variable?

- a. **Shampoo**
- b. Advertising
- c. Insurance
- d. Salaries



3. Which of the following calculations would you use to find Total Sales Revenue?

- a. Total Sales x Fixed Costs
- b. **Selling Price x Quantity Sold**
- c. Variable Costs + Fixed Costs

4. Which of the following calculations would you use to find Total Costs?

- a. **Fixed Costs + Variable Costs**
- b. Selling Price – Fixed Costs
- c. Total Fixed Costs / Selling Price – Variable Cost

5. How would you calculate Break Even?

- a. Selling Price x Quantity Sold
- b. Total Fixed Costs/Variable Cost Per Item
- c. Total Sales Revenue - Total Fixed Costs
- d. **Total Fixed Costs / Selling Price-Variable Cost Per Item**

6. If a pop-up candle shop has fixed costs of £2000, a variable cost of £5 per unit and they are selling their latest product for £10, what is the breakeven level of output?

- a. 40
- b. 200
- c. **400**
- d. They will not reach breakeven



7. If a business has fixed costs of £5000, a variable cost of £5 per unit and they are selling the product for £15, what is the breakeven level of output?

- a. 5000
- b. **500**
- c. 100
- d. 333

8. Bea and Poppy have created a new computer game, which they plan to sell through the internet. Their total fixed costs are £11,400 per year. They plan to sell the games at £25.00 each. The variable cost per unit is £13.00. What is the breakeven point?
 $11,400 / (25 - 13) = 950 \text{ games}$
9. Jack and James are selling personalised t-shirts. Their fixed costs total £5,000, their selling price is £9.99 and the variable cost per t-shirt is 4.99. What is the breakeven point?
 $5,000 / (9.99 - 4.99) = 1,000$
10. You are a sole trader selling pies at music festivals. On an average day you sell an average of 500 pies. You sell the pies for £2 each. Your pitch at the event costs you £300 per day; you then need to pay insurance of £50, and utilities of £10 per day. The cost of pastry and filling per pie come to 50p.

- a. Decide which of these costs are fixed and which are variable.

Fixed costs

Pitch £300

Insurance £50

Utilities £10

Variable costs

£0.50 per pie

- b. Work out how much profit or loss you will make per day.

Revenue = $2 \times 500 = £1,000$

Costs = $360 + (0.50 \times 500) = £610$

Profit = $1,000 - 610 = £390$



11. Cei Ltd estimates the costs and revenue for next month will be:

Selling Price £10 per unit

Variable Cost £5 per Unit

Fixed costs for the month £7,500

Maximum Output is 3,000 units per month

Complete the following table. How many units do they need to produce to breakeven?

Units of Output	Fixed Costs	Variable Costs	Total Cost	Sales Revenue	Profit/(Loss)
	£	£	£	£	£
0	7,500	0	7,500	0	(7,500)
500	7,500	2,500	10,000	5,000	(5,000)
1,000	7,500	5,000	12,500	10,000	(2,500)
<u>1,500</u>	<u>7,500</u>	<u>7,500</u>	<u>15,000</u>	<u>15,000</u>	<u>0</u>
2,000	7,500	10,000	17,500	20,000	2,500
2,500	7,500	12,500	20,000	25,000	5,000
3,000	7,500	15,000	22,500	30,000	7,500

How many units do they need to sell to breakeven? 1,500

Ext: Try drawing a breakeven graph for Cei Ltd.

Ext: How much profit do Cei Ltd make at 4,500 products? How about £10,200 products?

$45,000 - (7,500 + (5 \times 4,500)) = £15,000$

$102,000 - (7,500 + (5 \times 10,200)) = £43,500$