3.9 Break-Even: The Effect of Changes in Price, Costs and Output: 10-minute Pack

Total Marks

AQA 8132 · Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show your working for every calculation. Short answers may be a sentence or two; extended answers should be written in full sentences.

1 Which one of the following best describes contribution per unit, as used in break-even analysis for a UK small business?

- ☐ A) Fixed costs divided by selling price
- ☐ B) Selling price per unit minus variable cost per unit
- ☐ C) Total revenue minus fixed costs
- ☐ D) Variable cost per unit minus fixed cost per unit

(Total for Question 1 is 1 mark)

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2 State one piece of information a business must know to calculate a new break-even point after the selling price changes, naming the business context in your answer.

(Total for Question 2 is 1 mark)

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3 Oakford Bakeries sells one loaf for £4. Variable cost per loaf is £2. Fixed costs are £1,200 per month. The manager raises the selling price to £6 per loaf. Calculate the new break-even output for Oakford Bakeries after the price rise. Show your working.

(Total for Question 3 is 2 marks)

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4 Bright Brew Coffee, a local cafe, has selling price £5 per cup, variable cost £2 per cup and fixed costs £3,000 per month. The owner plans to reduce the variable cost to £1 per cup by sourcing cheaper packaging.

(a) Calculate the new break-even output after the variable cost falls.

(b) Explain one likely effect on Bright Brew Coffee of this change in variable cost.

(a) Calculate the new break-even output after the variable cost falls to £1 per cup, using the fixed costs and selling price given for Bright Brew Coffee. **(2)**

(b) Explain one likely effect on Bright Brew Coffee of reducing its variable cost per cup from £2 to £1. **(2)**

(Total for Question 4 is 4 marks)

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Mark scheme · 3.9 Break-Even: The Effect of Changes in Price, Costs and Output: 10-minute Pack

Question 1

B cao **B1**

Answer: B

Question 2

the variable cost per unit (e.g. for the bakery, the cost of flour and labour per loaf) **B1**

Answer: For example, the variable cost per unit (e.g. the cost of ingredients and direct labour per product).

Question 3

formula and substitution seen: break-even = fixed costs / (selling price - variable cost) with numbers 1,200 / (6 - 2) **M1**

300 units cao **A1**

Answer: 300 loaves.

Question 4

(a) formula and substitution seen: break-even = fixed costs / (selling price - variable cost) with numbers 3,000 / (5 - 1) **M1**

(a) 750 cups cao **A1**

(a) Answer: 750 cups.

(b) identifies an effect, e.g. break-even falls because contribution per cup rises **B1**

(b) develops the effect, e.g. the cafe needs to sell fewer cups to cover fixed costs or profit could rise at the same sales level **B1**

(b) Answer: The contribution per cup rises from 3 to £4 so break-even output falls, meaning the cafe needs to sell fewer cups to cover fixed costs and will make more profit at the same sales level.

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