# MyStudyBro - Revision Exercise Tool

This Revision Handout includes the Questions and Answers of a total of 5 exercises!

## Chapters:

### Break Even - Unit 2 (Pearson Edexcel)

**5** Loxton Pumps Ltd produces water pumps for vehicles. The company is owned by the Loxton family and has been trading for nearly 80 years.

The following information is available:

| | **November 2018** | **December 2018** | **January 2019** |
|---|---|---|---|
| Units produced | 48 000 | 39 000 | 50 000 (planned) |
| Total production costs | £785 830 | £661 900 | |

Fixed costs per month and variable costs per unit stay the same for each month.

All production is sold.

The selling price of each water pump is £16.80

**Required**

(a) Calculate the:

(i) variable cost per unit

**(3)**

(ii) fixed costs per month.

**(3)**

(b) Calculate the profit or loss for the month of December 2018.

**(4)**

(c) Calculate, for the month of January 2019, the:

(i) break-even point in sales units

**(4)**

(ii) margin of safety in sales revenue.

**(4)**

(d) Prepare a break-even chart for January 2019 using the graph. You should label the following:

- fixed costs
- total costs
- sales revenue
- break-even point
- margin of safety, measured in sales revenue
- profit or loss for the month.

**(6)**

At a board meeting in January, Robert Loxton stated "I am worried about the December figures. Should the company continue trading in the future?"

(e) Evaluate the statement made by Robert Loxton and recommend if Loxton Pumps Ltd should continue trading in the future.

**(6)**

**(Total for Question 5 = 30 marks)**

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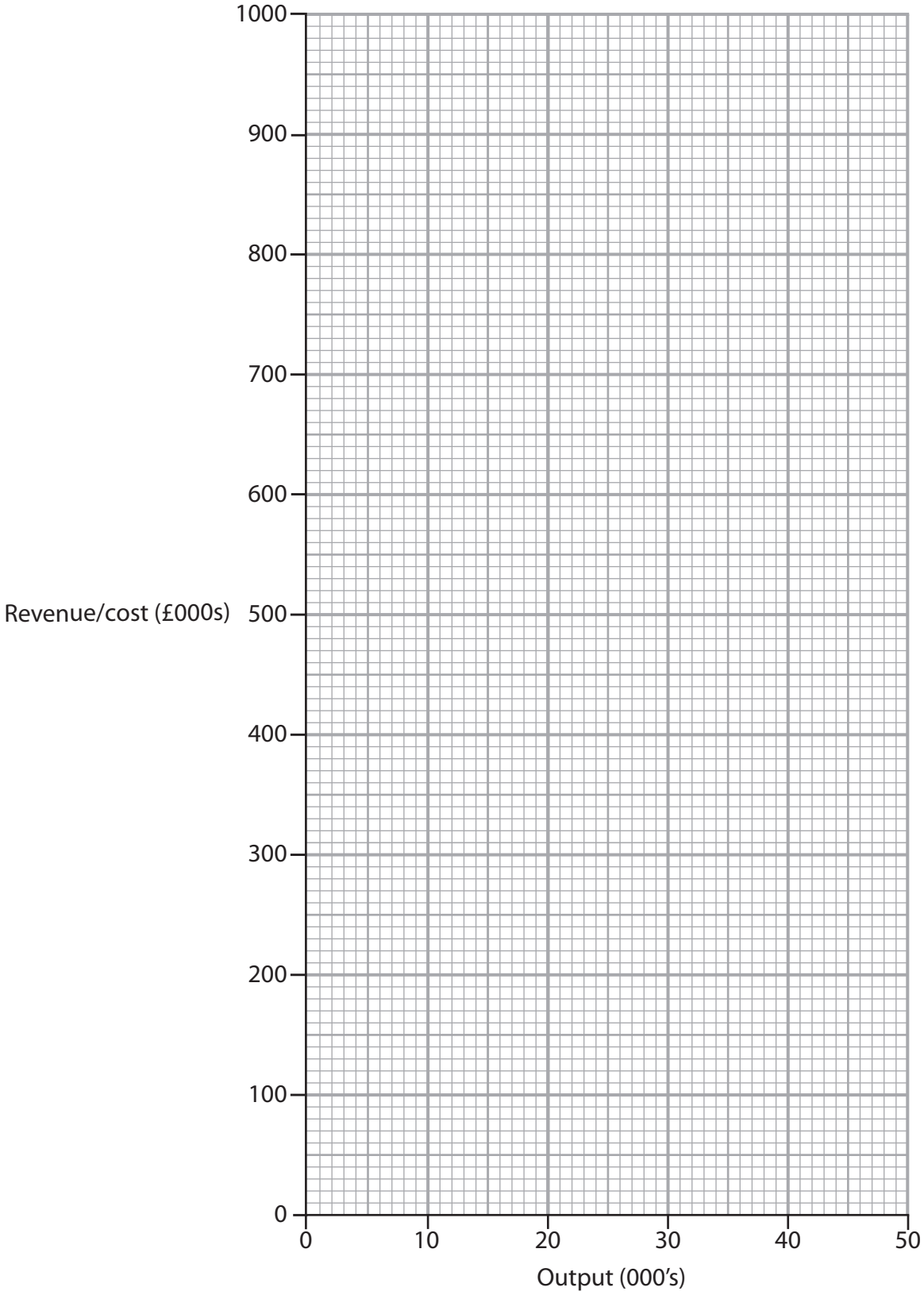


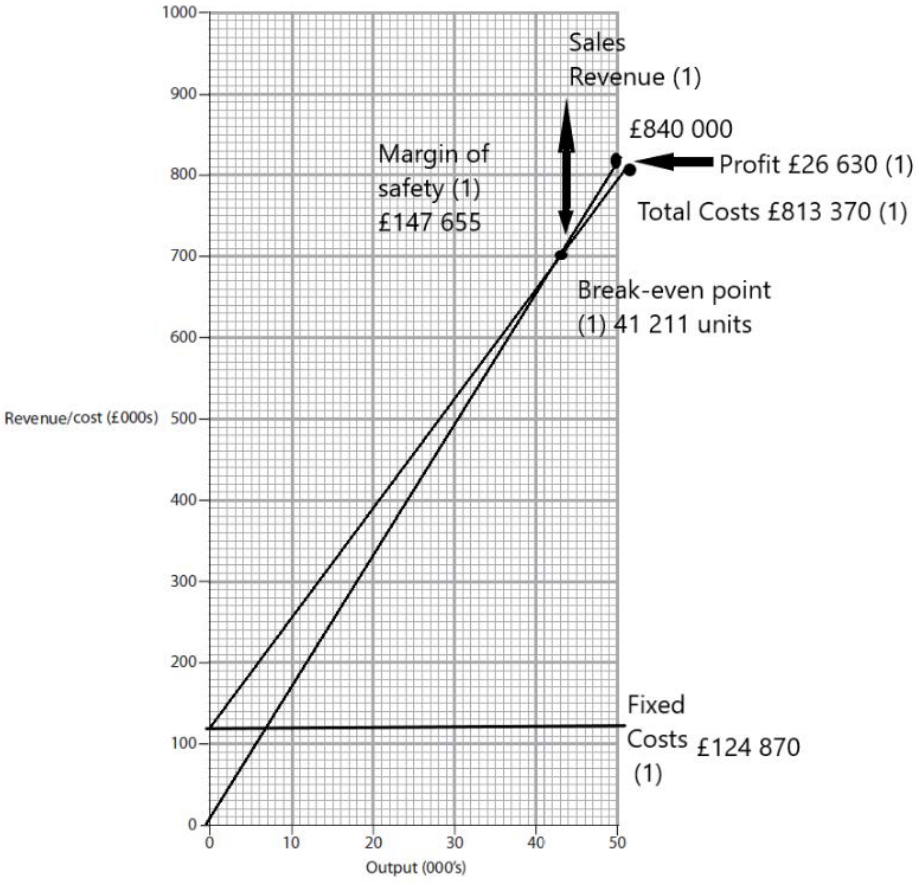
| Question Number | Answer | Mark |
|---|---|---|
| **5(a)(i)** | **AO3 (3)**<br>**AO3: Three marks for calculating the variable costs per unit.**<br><br>November December<br>Total<br>Production cost £785 830 £661 900<br>Units produced 48 000 39 000<br><br>Difference <u>£123 930</u> **(1) AO3**<br>9 000 **(1) AO3**<br><br>Variable cost<br>Per unit £13.77 **(1of) AO3** | **(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5(a)(ii)** | **AO1 (2), AO2 (1)**<br>**AO1: Two marks for calculation of variable cost and fixed costs figure for the subtraction.**<br>**AO2: One mark for correct subtraction to give answer.**<br><br>Variable cost £48 000 x £13.77= £660 960<br>for November **(1of) AO2**<br><br>Fixed cost £785 830 - £660 960 **(1of) AO1**<br><br>for November = £124 870 **(1of) AO1** | **(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5(b)** | **AO2 (4)**<br>**AO2: Four marks for correct calculation of profit or loss for the month.**<br><br><u>Profit for December</u><br><br>Sales Revenue £655 200 **(1) AO2**<br>Less<br><br>Variable costs (£537 030) **(1of) AO2**<br><br>Fixed costs (£124 870) **(1of) AO2**<br><br>Loss for month (£6 700) **(1of) AO** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5(c)(i)** | **AO3 (4)**<br>**AO3: Four marks for correct calculation of break-even point in sales units.**<br><br>Contribution<br>per unit £16.80 - £13.77 = £3.03 **(1of) AO3**<br><br>Break even <u>£124 870</u> **(1of) AO3** = 41 212 units<br>Point £ 3.03 **(1of) AO3** **(1of) A03** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5(c)(ii)** | **AO1 (3), AO2 (1)**<br>**AO1: Three marks for correct calculation of margin of safety in units and use of selling price.**<br>**AO2: One mark for correct calculation of margin of safety measured in sales revenue.**<br><br>Margin of safety (50 000 -41 212) **(1of) AO1**<br>**=** 8 788 units **(1of) AO1**<br><br>(8 788 x £16.80) **(1of) AO1**<br>**=** £147 638.40 **(1of) AO2** | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **5(d)** | **AO2 (6) One mark each for correctly drawing on the graph the following:**<br>**fixed costs**<br>**total costs**<br>**sales revenue**<br>**break-even point**<br>**margin of safety in sales revenue**<br>**profit or loss for the month**<br>  <br> | **(6)** |

| Question Number | Indicative Content | Mark |
|---|---|---|
| **5 (e)** | **AO4 (6). Own figure rule applies throughout.**<br><br>Answers may include:<br><br><u>Case For Continuing Trading</u><br>The company has achieved break-even point and made a profit in November.<br>The planned production for January should yield a profit if all the units are sold. It may be that the company produces to order, which guarantees sales.<br>Production may have been low in December because the company was shut for a holiday period for a week.<br><br><u>Case Against Continuing Trading</u><br>The company made a loss in December. If this a regular occurrence, then the company may have no future.<br><br><u>Other points</u><br>The figures for January are only estimates - they could be better or worse for the company.<br>What is the future order book like for the company.<br>Does the company have past profits to keep the company solvent in periods of poor sales?<br><br><u>Decision</u><br>The company should/should not continue trading. | **(6)** |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | A completely incorrect response. |
| Level 1 | 1-2 | Isolated elements of knowledge and understanding which are recall based.<br>Generic assertions may be present.<br>Weak or no relevant application to the scenario set. |
| Level 2 | 3-4 | Elements of knowledge and understanding, which are applied to the scenario.<br>Some analysis is present, with developed chains of reasoning, showing causes and/or effects applied to the scenario, although these may be incomplete or invalid.<br>An attempt at an evaluation is presented, using financial and perhaps non-financial information, with a decision. |
| Level 3 | 5-6 | Accurate and thorough knowledge and understanding. Application to the scenario is relevant and effective.<br>A coherent and logical chain of reasoning, showing causes and effects is present.<br>Evaluation is balanced and wide ranging, using financial and perhaps non-financial information and an appropriate decision is made. |

**6** Hasana Kwemoi will start a business producing soft toys, on 1 April 2018. She has yet to decide whether to produce the toys in a small factory, or use workers to produce the toys at home.

The following information is available for the factory.

Rent of factory £1 290 per quarter (three-month period).

Direct materials for production £0.32 per toy.

Labour to be paid a **fixed** rate of £115 per week, working a 40-hour week.

Insurance per year £510

Loan interest £250 a month.

Delivery costs £0.02 per toy.

Other fixed costs £65 a month.

All production will be sold, selling at £1.99 per toy.

Each worker can produce 3 toys per hour and 5 workers are to be employed.

Production is over a full year of 52 weeks.

**Required**

(a) Calculate the number of toys to be produced and sold in the year ended 31 March 2019 to break-even if the toys are produced in the factory.

**(9)**

(b) Calculate the expected profit or loss by Hasana in the year ended 31 March 2019 if the toys are produced in the factory.

**(3)**

The following information is available for production using workers at home.

Hasana would run the business from a small office and rent would be £425 per quarter.

Direct materials for production £0.32 per toy.

Labour would be paid a rate of £0.75 per toy produced.

Insurance would be £220 per year less than the factory.

Loan interest £125 a month.

Delivery costs £0.11 per toy.

Other fixed costs would be £25 a month less than the factory.

A motor van would have to be purchased for £5 000. This would last 8 years before being sold for £400.

All production will be sold at a selling price of £1.49 per toy.

Each worker would produce 20 toys a day, working for 5 days a week and 7 workers are to be employed.

Production is over a full year of 52 weeks.

**Required**

(c) Calculate the number of toys to be produced and sold in the year ended 31 March 2019 to break-even using workers to produce toys at home.

**(9)**

(d) Calculate the expected profit or loss by Hasana in the year ended 31 March 2019 using workers to produce toys at home.

**(3)**

(e) Evaluate the **two** possible production options for Hasana.

**(6)**

**(Total for Question 6 = 30 marks)**

**TOTAL FOR SECTION B = 90 MARKS**
**TOTAL FOR PAPER = 200 MARKS**

| | | |
|---|---|---|
| Level 3 | 5-6 | Accurate and thorough knowledge and understanding.<br>Application to the scenario is relevant and effective.<br>A coherent and logical chain of reasoning, showing causes and effects is present.<br>Evaluation is balanced and wide ranging, using financial and perhaps non-financial information and an appropriate decision is made. |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (a)** | **AO1 (3), AO2 (6)**<br>**AO1: Three marks for calculation of rent, labour and total fixed costs.**<br>**A02: Six marks for calculation of remaining fixed costs, total variable costs, contribution and break-even point.** | **(9)** |

| | |
|---|---|
| Fixed Costs | Rent (£1 290 x 4) = £5 160 **(1)**AO1<br>Labour (5 x £115 x 52) = £29 900 **(1)**AO1<br>Insurance = £510<br>Loan Interest (£250 x 12) = £3 000<br>Other FC (£65 x 12) = £780 **(1)**AO2 all three<br>Total FC = £39 350 **(1of)**AO1 |
| Variable Costs per unit | Direct materials = £0.32<br>Delivery costs = £0.02<br>Total VC = £0.34 **(1)**AO2 |
| Contribution per unit | (£1.99 - £0.34) = £1.65 **(1of)**AO2 |
| Break-even point | 39 350 **(1of)**AO2<br>1.65 **(1of)**AO2 |
| | = 23 849 units **(1of)**AO2 |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (b)** | **AO3 (3)**<br>**AO3: Three marks for calculation of profit.** | **(3)** |

| | |
|---|---|
| Sales | 31 200 x £1.99 = £62 088 **(1)**AO3 |
| Less Fixed Costs | = (£39 350) **of** |
| Less Variable Costs | (31 200 x £0.34) = (£10 608) **(1of)**AO3 both |
| = Profit | = £12 130 **(1of)** AO3 |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (c)** | **AO1(2), AO2 (6), AO3 (1)**<br>**AO1: Two marks for calculation of rent and total fixed costs.**<br>**AO2: Six marks for calculation of three fixed costs, total variable costs, contribution and break-even point.**<br>**AO3: One mark for correct calculation of depreciation.** | **(9)** |

| | |
|---|---|
| Fixed Costs | Rent (£425 x 4) = £1 700 **(1)**AO1<br>Insurance = £290<br>Loan Interest (£125 x 12) = £1 500<br>Other FC (£40 x 12) = £480 **(1)**AO2 all three<br>Depreciation (5 000 – 400)/8 = £575 **(1)**AO3<br>Total FC = £4 545 **(1of)**AO1 |
| Variable Costs per unit | Direct materials = £0.32<br>Delivery costs = £0.11<br>Direct labour = £0.75<br>Total VC = £1.18 **(1)**AO2 |
| Contribution per unit | (£1.49 - £1.18) = £0.31 **(1of)**AO2 |
| Break-even point | 4 545 **(1of)**AO2<br>£0.31 **(1of)**AO2 |
| | = 14 662 units **(1of)**AO2 |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (d)** | **AO3 (3)**<br>**AO3: Three marks for calculation of profit.** | **(3)** |

| | |
|---|---|
| Sales | 36 400 x £1.49 = £54 236 **(1)**AO3 |
| Less Fixed Costs | = (£4 545) **of** |
| Less Variable Costs | (36 400 x £1.18) = (£42 952) **(1of)**AO3 both |
| = Profit | = £6 739 **(1of)**AO3 |

| Question Number | Indicative Content | Mark |
|---|---|---|
| **6 (e)** | **A04 (6)**<br>Own figure rule applies<br><br>Producing in a factory<br><br>Profit is greater at £12 130 compared to £6 739 using home workers. This is higher by £5 391<br>Output is 31 200 units with labour paid £0.95 per toy.<br>Perhaps it is possible to reduce break-even point by paying labour for every unit produced i.e. make labour a variable cost.<br>Factory premises need to be found, which may be difficult.<br><br>Producing using home workers<br><br>Break-even point is less at 14 662 units compared to 23 849 units producing in the factory. This is lower by 9 187 units.<br>Output is 36 400 units with labour paid £0.75 per toy.<br>Costs are lower, and the selling price is lower, but is it possible to increase the selling price?<br>Less capital required to start up the business.<br>Delivering parts and finished products to and from home workers may not be environmentally friendly,<br>Production target may be more difficult to achieve as workers are working unsupervised.<br><br>Other points<br><br>Figures are all predictions and may not be as expected.<br><br>Decision<br><br>Should produce using the factory, as profit is more important than break-even point. | **(6)** |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | A completely incorrect response. |
| Level 1 | 1-2 | Isolated elements of knowledge and understanding which are recall based.<br>Generic assertions may be present.<br>Weak or no relevant application to the scenario set. |

| | | |
|---|---|---|
| Level 2 | 3-4 | Elements of knowledge and understanding, which are applied to the scenario.<br>Some analysis is present, with developed chains of reasoning, showing causes and/or effects applied to the scenario, although these may be incomplete or invalid.<br>An attempt at an evaluation is presented, using financial and perhaps non-financial information, with a decision. |
| Level 3 | 5-6 | Accurate and thorough knowledge and understanding.<br>Application to the scenario is relevant and effective.<br>A coherent and logical chain of reasoning, showing causes and effects is present.<br>Evaluation is balanced and wide ranging, using financial and perhaps non-financial information and an appropriate decision is made. |

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**6** Wittwater Mining plc carries out regular reviews of its operations. The world price of gold has risen to £32 000 per kilo and is expected to stay at this level. This has resulted in Wittwater Mining plc considering reopening some gold mines that it had previously closed, as they were making a loss. These are the three gold mines in the Eastern Area. Wittwater Mining plc cannot sell at a price above £32 000 per kilo as customers would purchase from other suppliers.

The estimates for 2019 for the three gold mines in the Eastern area are nearing completion.

All production of gold is sold at the world price, of £32 000 per kilo.

The following information is available (some figures are given in total, others are given per kilo):

| | **Boksville mine** | **Igolide mine** | **Orange Deep mine** |
|---|---|---|---|
| Revenue | To be calculated | To be calculated | £29 760 000 |
| Direct labour | £17 500 000 | £16 000 per kilo | £17 670 000 |
| Direct materials | £7 000 000 | £6 000 per kilo | £11 000 per kilo |
| Fixed costs | £10 500 000 | £4 400 000 | To be calculated |
| Production - kilos | 700 | 550 | To be calculated |

Fixed costs for the Orange Deep mine are made up of the following:

- plant, property and equipment that cost £135 000 000 is being depreciated over 15 years, using the straight line method
- other fixed costs will be £5 880 000

**Required**

(a) Calculate the **total** estimated profit or loss for **each** gold mine for 2019.

**(12)**

(b) Calculate the estimated contribution, and the estimated profit or loss, made by **each** of the three gold mines, **per kilo produced**, for 2019.

**(12)**

(c) Evaluate the figures calculated in (b) to make a decision as to the future of **each** of the three gold mines.

**(6)**

**(Total for Question 6 = 30 marks)**

**TOTAL FOR SECTION B = 90 MARKS**
**TOTAL FOR PAPER = 200 MARKS**

**Source material for Question 6 is on page 14 of the Source Booklet.**

**If you answer Question 6 put a cross in the box ☒ .**

**6** (a) Calculate the **total** estimated profit or loss for **each** gold mine for 2019.

**(12)**

| | **Boksville mine** | **Igolide mine** | **Orange Deep mine** |
|---|---|---|---|
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Workings

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(b) Calculate the estimated contribution, and the estimated profit or loss, made by **each** of the three gold mines, **per kilo produced**, for 2019.

**(12)**

| Per kilo | Boksville | Igolide | Orange Deep |
|---|---|---|---|
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Workings

| | | |
|---|---|---|
| Level 3 | 5-6 | Accurate and thorough knowledge and understanding.<br>Application to the scenario is relevant and effective.<br>A coherent and logical chain of reasoning, showing causes and effects is present.<br>Evaluation is balanced and wide ranging, using financial and perhaps non-financial information and an appropriate decision is made. |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (a)** | **AO1 (5), AO2 (7)**<br>**AO1: 5 marks for calculation of sales revenue and inclusion and calculation of fixed costs.**<br>**AO2: 7 marks for calculation of direct labour and direct materials and profit or loss per mine.**<br><br>Workings:<br>Direct materials<br><br>29 760 000 / 32 000 = 930 kilos (1) AO2 x £11 000 per kilo<br><br>= £10 230 000 (1) AO2<br><br>Fixed Costs<br><br>£135 000 000 / 15 = £9 000 000 per year (1) AO1<br><br>+ £5 880 000 = £14 880 000 (1) AO1 | **(12)** |

| | **Boksville** | | **Igolide** | | **Orange Deep** | |
|---|---|---|---|---|---|---|
| Sales Revenue | 22 400 000 | **(1) AO1** | 17 600 000 | **(1) AO1** | 29 760 000 | |
| | | | | | | |
| Direct Labour | 17 500 000 | | 8 800 000 | **(1) AO2** | 17 670 000 | |
| Direct Materials | 7 000 000 | | 3 300 000 | **(1) AO2** | 10 230 000 | **(2) AO2** |
| Fixed Costs | 10 500 000 | | 4 400 000 | | 14 880 000 | **(2) AO1** |
| Total costs | 35 000 000 | | 16 500 000 | | 42 780 000 | **(1of) AO1** |
| Profit (Loss) | (12 600 000) | **(1of) AO2** | 1 100 000 | **(1of) AO2** | (13 020 000) | **(1of) AO2** |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (b)** | **AO2 (5), AO3 (7)**<br>**AO2: 5 marks for calculation of direct labour, direct materials, and profit or loss per unit.**<br>**AO3: 7 marks for calculation of sales revenue, contribution and fixed costs per unit.** | **(12)** |

| **Per kilo** | **Boksville** | | **Igolide** | | **Orange Deep** | |
|---|---|---|---|---|---|---|
| Sales Revenue | 32 000 | | 32 000 | | 32 000 | **(1) AO3** |
| | | | | | | all three |
| Direct Labour | 25 000 | both | 16 000 | | 19 000 | **(1) AO2** |
| Direct Materials | 10 000 | **(1) AO2** | 6 000 | | 11 000 | |
| | | | | all three | | both |
| Contribution | (3 000) | **(1of) AO3** | 10 000 | **(1of) AO3** | 2 000 | **(1of) AO3** |
| | | | | | | |
| Fixed Costs | 15 000 | **(1) AO3** | 8 000 | **(1) AO3** | 16 000 | **(1) AO3** |
| | | | | | | |
| Profit (Loss) | (18 000) | **(1of) AO2** | 2 000 | **(1of) AO2** | (14 000) | **(1of) AO2** |

| Question Number | Indicative Content | Mark |
|---|---|---|
| **6 (c)** | **AO4 (6)**<br><br>Boksville<br><br>Makes a negative contribution (o/f), so should not be reopened, even in the short term. Also makes a loss (o/f)<br><br>Igolide<br><br>Makes a positive contribution (o/f), so should be reopened. Makes a profit (o/f), so should stay open in the long term.<br><br>Orange Deep<br><br>Makes a positive contribution (o/f), so could be reopened. However, makes an overall loss (o/f), so should not stay open in the long term. | **(6)** |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | A completely incorrect response. |
| Level 1 | 1-2 | Isolated elements of knowledge and understanding which are recall based.<br>Generic assertions may be present.<br>Weak or no relevant application to the scenario set. |
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| Level 3 | 5-6 | Accurate and thorough knowledge and understanding.<br>Application to the scenario is relevant and effective.<br>A coherent and logical chain of reasoning, showing causes and effects is present.<br>Evaluation is balanced and wide ranging, using financial and perhaps non-financial information and an appropriate decision is made. |

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**5** Jacinda started a business selling soft drinks from mobile freezers in sites popular with tourists. The town authorities have signed a contract that allowed Jacinda to sell drinks from four sites, for the seven summer months of the year, starting 1 March 2018. For the remaining five months, Jacinda does not trade.

The following information is available for the business for the year ended 28 February 2019:

- Each site will be rented for seven months of the year. Rent of site per month:

| Downs Park | North Beach | Pavilion Park | South Beach |
|---|---|---|---|
| £100 | £120 | £80 | £160 |

- Drinks are sold for £0.55 (55 pence) each
- Drink sellers receive £0.20 (20 pence) for each drink sold
- Insurance for the year is £1 250
- Drinks are purchased for £0.11 (11 pence) each from wholesalers
- The mobile freezers cost £2 700 each and are expected to last for nine years. Jacinda has one for each site and a spare in case of a breakdown
- A small storage warehouse is rented for £275 per quarter (three months). This warehouse is rented for a full year
- Electricity bill is £35 per month, for every month of the year
- As part of the contract, the town authorities will charge a local tax of £0.01 (1 pence) on every drink sold
- Loan interest and repayment is £285 per month, for every month of the year
- Sales for each site (drinks per day) are:

| Downs Park | North Beach | Pavilion Park | South Beach |
|---|---|---|---|
| 110 | 210 | 175 | 180 |

- Drinks are sold for 200 days of the year.

**Required**

(a) Calculate, for the year ended 28 February 2019, the:

(i) number of drinks that need to be sold to break-even

**(11)**

(ii) forecast profit for the year.

**(5)**

The following information is available for the second year of trading, ended 29 February 2020:

- Fixed costs will total £11 000 for the year
- Drinks will be purchased for £0.12 (12 pence) each
- The council will charge a tax of £0.02 (2 pence) for every drink sold
- Jacinda has promised the drink sellers a pay rise, for every drink sold, in the second year
- Target profit for the year will be £21 400
- The number of drinks sold will remain constant.

**Required**

(b) Calculate, in order to achieve the target profit:

(i) the required contribution per drink sold

**(5)**

(ii) a suitable pay rate to pay sellers for each drink sold, and a selling price for each drink sold.

**(3)**

The town authorities require all businesses that sign a contract with them to produce audited financial statements for their inspection.

(c) Evaluate the decision of the town authorities requiring Jacinda's business to produce audited financial statements for inspection.

**(6)**

**(Total for Question 5 = 30 marks)**

| Question Number | Answer | Mark |
|---|---|---|
| **5 (a)(i)** | **AO1 (4), AO2 (7)**<br>**AO1: Fourmarks for calculation of site rent, electricity, total fixed costs, and variable costs per unit.**<br>**AO2: Seven marks for correct calculation of warehouse rent, depreciation, loan interest, contribution per unit, and break-even point** | **(11)** |

Fixed Costs - per year

Rent (£460 x 7) = £3 220 **(1) AO1**
Insurance = £1 250
Warehouse (£275 x 4) = £1 100 **(1) both AO2**
Depreciation £2700 x 5 / 9 = £1 500 **(1) AO2**
Electricity (£35 x 12) = £ 420 **both**
Loan (£285 x 12) = £3 420 **(1) AO2**
Total FC £10 910 **(1 of) AO1**

Variable costs per unit

(0.20 + 0.11 + 0.01)
Total £0.32 per unit **(1)AO1**

Contribution per unit

(£0.55 - £0.32) **(1 of)AO2** = £0.23 **(1 of) AO1**

Break Even Point = £10 910 **(1 of) AO2** / £0.23 **(1 of) AO2** = 47 435 drinks **(1 of) AO2**

| Question Number | Answer | Mark |
|---|---|---|
| **5 (a)(ii)** | **AO2 (5)**<br>**AO2: Five marks for correct calculation of profit for 2019** | **(5)** |

Profit for 2018

Sales = (110 + 210 + 175 + 180) x 200 = 135 000 units **(1)** **AO2**

Sales revenue = 135 000 x 0.55 = £74 250 **(1 of)** **AO2**

Less VC = 135 000 x 0.32 o/f = (£43 200) **(1 of)** **AO2**

Less FC = (£10 910) **(1 of)** **AO2**

Profit = £20 140 **(1 of)** **AO2**

| Question Number | Answer | Mark |
|---|---|---|
| **5 (b)(i)** | **A01 (1) AO3 (4)**<br>**AO1: One mark for totalling target profit and fixed costs.**<br>**AO3: Four marks for including target profit and fixed costs, and three marks for calculating the required contribution per unit** | **(5)** |

Target profit = £21 400

+ Fixed costs = £11 000 **(1)** **AO3**

£32 400 **(1)** **AO1**

135 000 o/f x Contribution per unit = £32 400 **(1)** **AO3**

Contribution per unit = £32 400 **(1of)** **AO3** = £0.24 **(1of)** **AO3**
135 000

| Question Number | Answer | Mark |
|---|---|---|
| **5 (b)(ii)** | **AO3 (3)**<br>**AO3: Three marks for calculating a selling price 38 pence above labour cost (as long as labour cost is above 20 pence)** | **(3)** |

Selling price – Variable costs = Contribution

SP - (Labour cost per drink + 0.12 + 0.02) = £0.24 **(1)** **AO3**

So selling price must be £0.38 higher than labour cost **(1)** **AO3**

For example Selling price £0.60 and labour cost £0.22 **(1)** **AO3**

(Accept any answer where selling price is £0.38 higher than labour cost, as long as labour cost is above 20 pence (£0.20))

| Question Number | Indicative Content | Mark |
|---|---|---|
| **5 (c)** | **AO4 (6)**<br><br><u>Case for</u><br>The town authorities could see a true and fair view of the number of drinks sold by the business. This would allow them to charge an accurate tax on Jacinda's business.<br>Jacinda is assured she is meeting all necessary requirements and disclosures, which may ensure future contracts for Jacinda.<br>It will help Jacinda ensure a smooth running of the business helping her e.g. control costs, planning, decision making.<br><br><u>Case against</u><br>The town authorities would have to pay a member of staff to study the audited accounts, which would cost time and money.<br>Jacinda has to go to the time and expense of having her accounts audited.<br>Loss of confidentiality by Jacinda.<br><br><u>Decision</u><br>It would be worthwhile for the town authorities to study the audited financial statements of Jacinda. | **(6)** |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | A completely incorrect response. |
| Level 1 | 1-2 | Isolated elements of knowledge and understanding which are recall based.<br>Generic assertions may be present.<br>Weak or no relevant application to the scenario set. |
| Level 2 | 3-4 | Elements of knowledge and understanding, which are applied to the scenario.<br>Some analysis is present, with developed chains of reasoning, showing causes and/or effects applied to the scenario, although these may be incomplete or invalid.<br>An attempt at an evaluation is presented, using financial and perhaps non-financial information, with a decision. |

| | | |
|---|---|---|
| Level 3 | 5-6 | Accurate and thorough knowledge and understanding. Application to the scenario is relevant and effective. A coherent and logical chain of reasoning, showing causes and effects is present. Evaluation is balanced and wide ranging, using financial and perhaps non-financial information and an appropriate decision is made. |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (a)(i)** | **AO1 (3)**<br>**AO1: Three marks for correct calculation of total ordinary dividend paid.**<br><br>Total ordinary dividend paid<br>= Dividend per share x number of shares<br><br>= 6 pence **(1) AO1** x 15 000 000 **(1) AO1**<br>= £900 000 **(1) AO1** | **(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (a)(ii)** | **AO3 (3)**<br>**AO3: Three marks for correct calculation of share price.**<br><br>Share price<br>= Earnings per share x Price/earnings ratio<br><br>= 15 pence **(1) AO3** x 8.4 times **(1) AO3**<br>= £1.26 **(1) AO3** | **(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **6 (a)(iii)** | **AO2 (3)**<br>**AO2: Three marks for correct calculation of dividend yield.**<br><br>Dividend yield = Dividend per share / Market price of a share<br><br>= 6 pence **(1) AO2** x 100 / 126 pence **(1 of) AO2**<br><br>= 4.76% **(1 of) AO2** | **(3)** |

## SECTION B

**Answer THREE questions from this section.**

**3** Soundz Around won a contract to supply 35 000 headphone sets in its first year of trading to a multinational retailer. You are the Cost Accountant, and the following information is available for Year 1:

- factory rent was £7 275 per quarter (three months)
- material costs per headphone set £3.85
- direct labour costs per headphone set £5.35
- electricity £6 500 per year plus 3 pence (£0.03) per headphone set
- insurance for the whole business was £220 per month
- other fixed costs were £2 980 per month
- each headphone set sells for £14.99
- the business operates for 50 weeks in a year.

**Required**

(a) Calculate, for Year 1, the break-even point in:

(i) sales units

**(8)**

(ii) sales revenue.

**(2)**

(b) Calculate, for Year 1, the:

(i) margin of safety in sales revenue

**(3)**

(ii) profit for the year.

**(4)**

The following figures are estimated for Year 2:

- factory rent will rise to £7 500 per quarter (three months)
- insurance for the whole business will rise by 10%
- other fixed costs will rise by £125 per month
- material costs will rise by 2 pence (£0.02) per headphone set
- labour costs will rise by 5 pence (£0.05) per headphone set
- output and sales are to remain at 35 000 headphone sets
- all other costs and the selling price will remain the same.

The owner of Soundz Around wishes to see the Year 2 estimated figures on a graph.

(c) Prepare and label the following on the graph in the Question Paper:

- fixed costs
- total costs
- sales revenue
- break-even point
- margin of safety, measured in sales units
- angle of incidence
- profit for the year.

**(7)**

(d) Evaluate the use of ICT in break-even analysis.

**(6)**

**(Total for Question 3 = 30 marks)**

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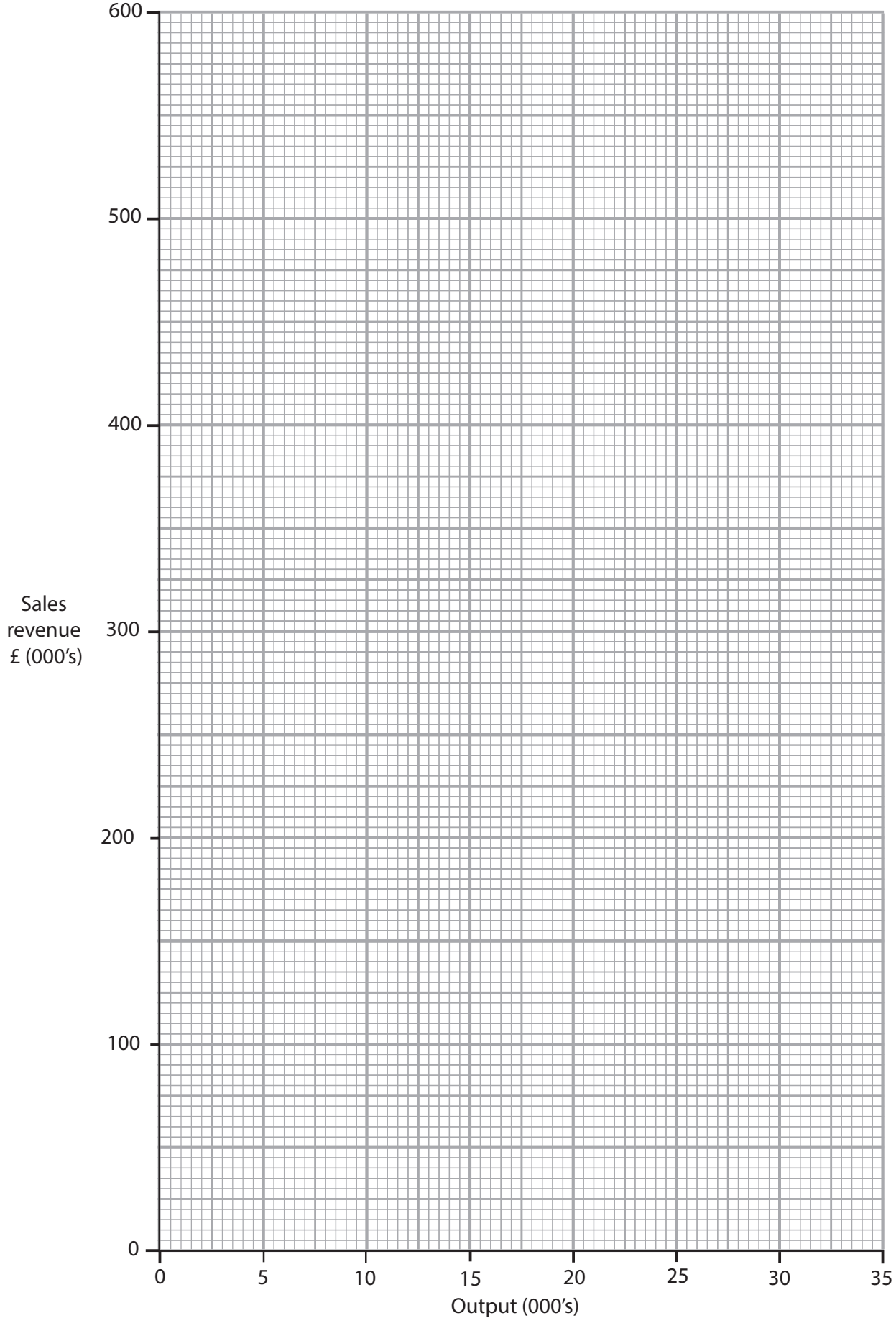
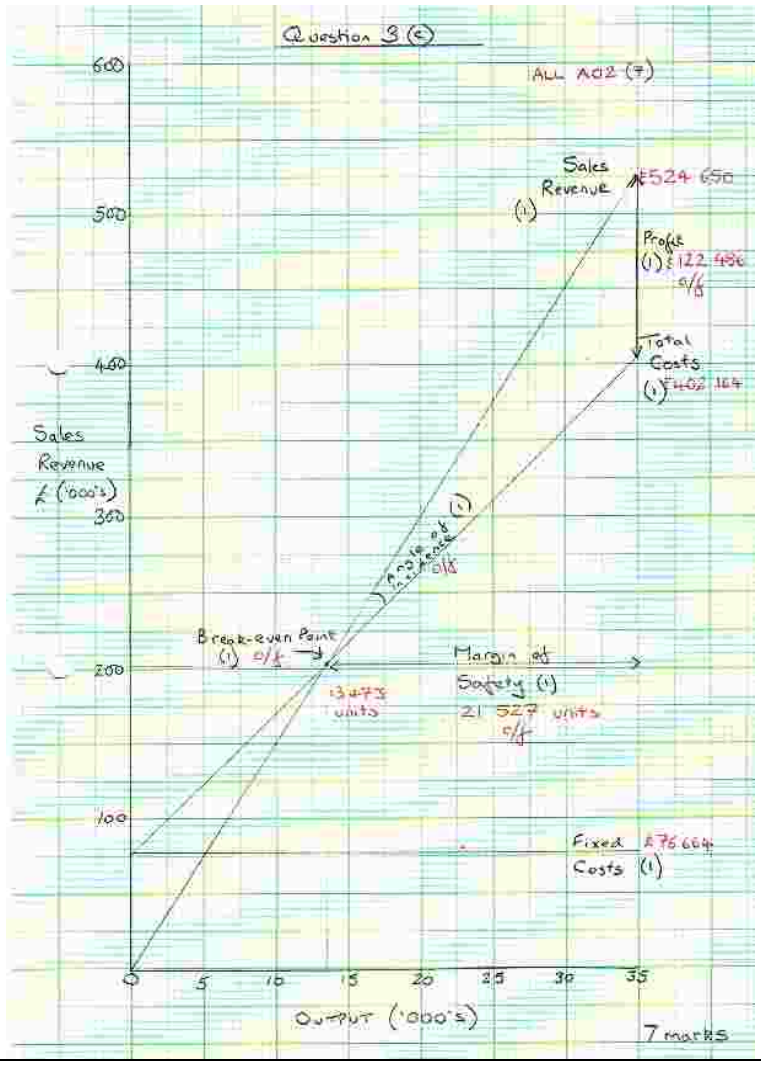


| Question Number | Answer | Mark |
|---|---|---|
| **3 (a)(i)** | **AO1(4), AO2 (1), AO3 (3)**<br>**AO1: Four marks for correct calculation of fixed and variable costs.**<br>**AO2: One mark for correct calculation of contribution.**<br>**AO3: Three marks for correct calculation of break-even point.**<br><br>Fixed Costs Variable costs per unit<br><br>Rent £29 100 £3.85 + £5.35 + £0.03 = £9.23 (1) AO1<br>Electricity £6 500 (1) AO1<br>Insurance £2 640 Contribution per unit<br>Other FC £35 760 (1) AO1 £14.99 - £9.23 o/f = £5.76 (1) o/f AO2<br>Total FC £74 000 (1) o/f AO1<br><br>Break Even Point = £74 000 o/f (1) AO3 = 12 848 units (1) o/f AO3<br>£5.76 o/f (1) AO3 | **(8)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3 (a)(ii)** | **AO2 (2)**<br>**AO2: Two marks for correct calculation of break-even point in sales revenue.**<br><br>Break even point (£)<br>= (12 848 o/f x 14.99) (1) AO2<br>= £192 591.52 (1) o/f AO2 | **(2)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3 (b)(i)** | **AO1(1), AO3 (2)**<br>**AO1: One mark for correct calculation of margin of safety.**<br>**AO3: Two marks for analysis of data to help calculation of margin of safety.**<br><br>Margin of safety = (35 000 x 14.99) (1) AO3 - 192 591.52 (1) o/f AO3<br>= £524 650 - £192 591.52 o/f<br>= £332 058.48 (1) o/f AO1 | **(3)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3 (b)(ii)** | **AO2 (2), AO3 (2)**<br>**AO2: Two marks for correct calculation of contribution and profit.**<br>**AO3: Two marks for analysis of data to help calculation of contribution and fixed costs.**<br><br>Profit<br>Contribution (£5.76 o/f x 35 000) (1) AO3<br>= £201 600 o/f (1) AO2<br>Less FC = (£74 000) o/f (1) AO3<br>Profit = £127 600 o/f (1) AO2 | **(4)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3 (c)** | **AO2 (7)**<br>  | **(7)** |

| Question Number | Answer | Mark |
|---|---|---|
| **3 (d)** | **AO4 (6)**<br><u>Case for ICT</u><br>• Saves time and therefore money, compared to preparing accounts by hand.<br>• Spreadsheets can be used for calculations for break-even analysis.<br>• Spreadsheets can also be used to generate graphical information.<br><br><u>Case against ICT</u><br>• Financial cost of hardware, software, staff training, running costs, maintenance etc.<br>• If staff are not trained or are unskilled, they can make errors, which may lead to generation of incorrect information.<br>• Security risks if management or company wish to keep the information confidential.<br>• Computer crashes, freezes etc which may result in a loss of information and waste of staff time.<br><u>Decision</u><br>ICT is very advantageous for break-even analysis. The decision should be supported by reference to key points of their argument. | **(6)** |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | A completely incorrect response. |
| Level 1 | 1-2 | Isolated elements of knowledge and understanding that are recall based.<br>Generic assertions may be present.<br>Weak or no relevant application to the scenario set. |
| Level 2 | 3-4 | Elements of knowledge and understanding, which are applied to the scenario.<br>Some analysis is present, with developed chains of reasoning, showing causes and/or effects applied to the scenario, although these may be incomplete or invalid.<br>An attempt at an evaluation is presented, using financial and perhaps non-financial information, with a decision. |
| Level 3 | 5-6 | Accurate and thorough knowledge and understanding.<br>Application to the scenario is relevant and effective.<br>A coherent and logical chain of reasoning, showing causes and effects is present.<br>Evaluation is balanced and wide-ranging, using financial and perhaps non-financial information and an appropriate decision is made. |