

Edexcel A Level Business Linear Worksheet 9 – Themes 1 and 2 - Answers

- 1. Below shows the budgeted and actual revenue and expenditure for a restaurant in July and August. Calculate the total profit variance for July and August stating whether it is adverse or favourable.**

	July		August	
	Budget £	Actual £	Budget £	Actual £
Total Revenue	200,000	190,000	210,000	195,000
Total Expenditure	160,000	155,000	175,000	160,000

Budgeted profit for July = £200,000 - £160,000 = £40,000

Budgeted profit for August = £210,000 - £175,000 = £35,000

Total profit budget = £40,000 + £35,000 = £75,000

Actual profit for July = £190,000 - £155,000 = £35,000

Actual profit for August = £195,000 - £160,000 = £35,000

Total actual profit = £35,000 + £35,000 = £70,000

Variance = £70,000 - £75,000 = £5,000 adverse

- 2. State two factors that could lead to a change in supply.**

Changes in the cost of production, introduction of new technology, indirect taxes, government subsidies, external shocks

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3. A marketing manager estimates the PED of its product has changed from -1.9 two years ago to -0.6 today.

3a. Briefly explain why the business may be happy with this news.

Consumers will be less responsive to changes in price. The firm would be able to raise prices by say 10% and would only lose 6% of sales (rather than 19%) meaning this could be a good way to raise revenue.

3b. Briefly explain how the business may have been able to achieve this.

- *Successful promotion / branding*
- *Elimination of substitutes e.g. merging with competitors*
- *Entering a different sub-market where there are fewer substitutes*
- *Increasing quality or improving the product e.g. through additional features, so competitors' products do not seem a close substitute*

4. Identify whether the statement is related to capital-intensive production or labour-intensive production.

	Statement	Capital or labour-intensive?
a.	Involves primarily the use of machinery to make output	<i>Capital-intensive</i>
b.	Maintenance costs must be considered	<i>Capital-intensive</i>
c.	Could be particularly useful if work has health and safety concerns	<i>Capital-intensive</i>
d.	Method of production meaning labour costs account for a large percentage of a firm's total costs	<i>Labour-intensive</i>
e.	Some countries have unreliable sources of power making this method of production less attractive	<i>Capital-intensive</i>
f.	Cheaper to start up	<i>Labour-intensive</i>
g.	Higher barriers to entry in industries requiring this method of production	<i>Capital-intensive</i>
h.	More likely to be profitable if the minimum wage rate in a country is low	<i>Labour-intensive</i>
i.	Can be inflexible e.g. if each product is very different to the next, it may not be a suitable production method	<i>Capital-intensive</i>
j.	Production is more likely to run the risk of human error	<i>Labour-intensive</i>
k.	Staff motivation is very important here	<i>Labour-intensive</i>

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13 - ANSWERS

- 1. List four potential stakeholders in a UK cosmetics company and write down at least two examples of a want/ demand that they may have. Examples...**

Stakeholder group	Wants/demands
<i>Customers</i>	<i>Good value products</i> <i>Product range e.g. different shades of makeup</i>
<i>Employees</i>	<i>Job security</i> <i>Fair pay</i> <i>Promotion opportunities</i>
<i>Pressure groups</i>	<i>No animal testing</i> <i>Ethical sourcing of ingredients e.g. no microbeads</i>
<i>Government</i>	<i>Non-misleading advertising</i> <i>Accurate corporation tax paid</i> <i>Successful exporting</i> <i>Use of British raw materials and provision of jobs</i>

- 2. A business has fixed costs of £50,000 per year. Selling price per unit is £5. Variable cost per unit is 2/5 the selling price per unit. Calculate the yearly break-even point.**

$$\text{Contribution per unit} = SP - VC = £5 - £2 = £3$$

$$\text{Break-even} = £50,000 / £3 = 16,667 \text{ units}$$

- 3. A business is considering expansion either in the United States or China. The estimated cash flows are shown below.**

Year	Net cash flows for USA (£m)	Net cash flows for China (£m)
0	(5)	(12)
1	1.5	2
2	3.5	3
3	4	9

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4	4	19
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3a. Calculate the ARR for each option.

USA: 40%

$$(\text{£13m} - \text{£5m}) / 4 = \text{£2m}$$

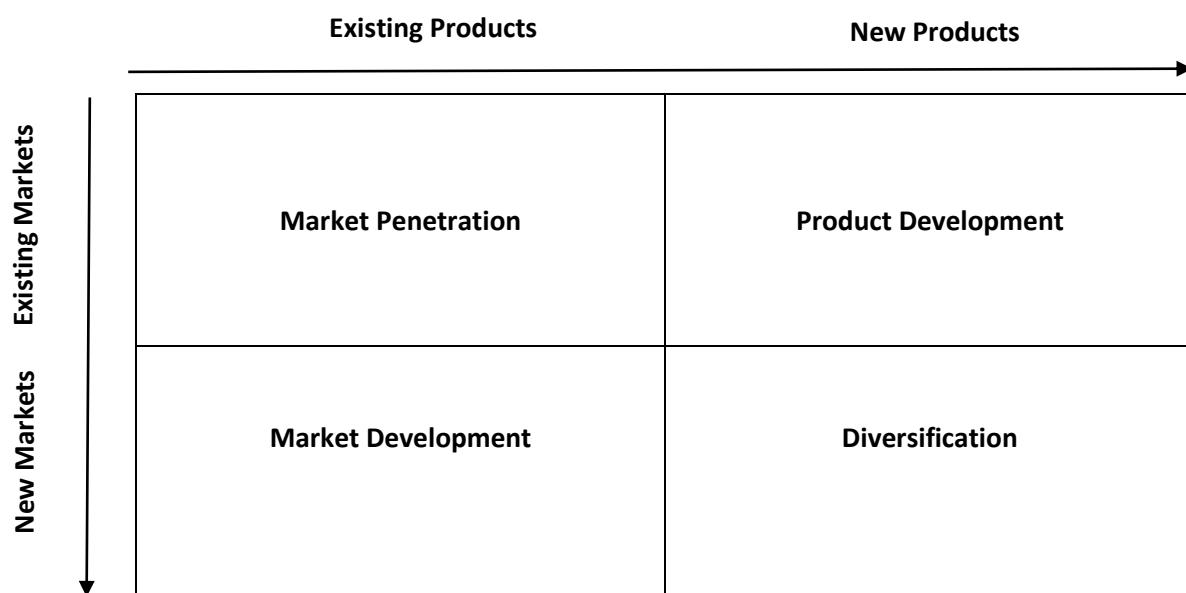
$$(\text{£2m} / \text{£5m}) \times 100 = 40\%$$

China: 43.75%

$$(\text{£33m} - \text{£12m}) / 4 = \text{£5.25m}$$

$$(\text{£5.25m} / \text{£12m}) \times 100 = 43.75\%$$

3. Complete the Ansoff's Matrix below



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4. The size of a market in 2016 was £2 million, an increase of 4% from the previous year. Calculate the size of the market in 2015.

$$\text{£2.0m} / 1.04 = \text{£1,923,077m}$$

19 ANSWERS

1. Complete the table below which illustrates different costs as a business grows.

Output	Variable cost per unit	Total variable cost	Fixed costs	Total cost	Unit cost
100	£1	£100	£20,000	£20,100	£201
1000	£0.50	£500	£20,000	£20,500	£20.5
10,000	£0.10	£1000	£20,000	£21,000	£2.1

1a. Use the table to help you explain at least two reasons why average costs fall as a firm grows.

- Purchasing economies of scale – average variable costs fall as the firm can buy raw materials in bulk
- Fixed costs can be spread out over more units of output

1b. The business charges a price of £30. Calculate the break-even point at each output level and what its margin of safety would be, assuming all output is sold.

Output level 100

$$\text{£20,000} / (\text{£30} - \text{£1}) = 690 \text{ units} - \text{no margin of safety} \text{ as the business cannot break-even with 100 units}$$

Output level 1000

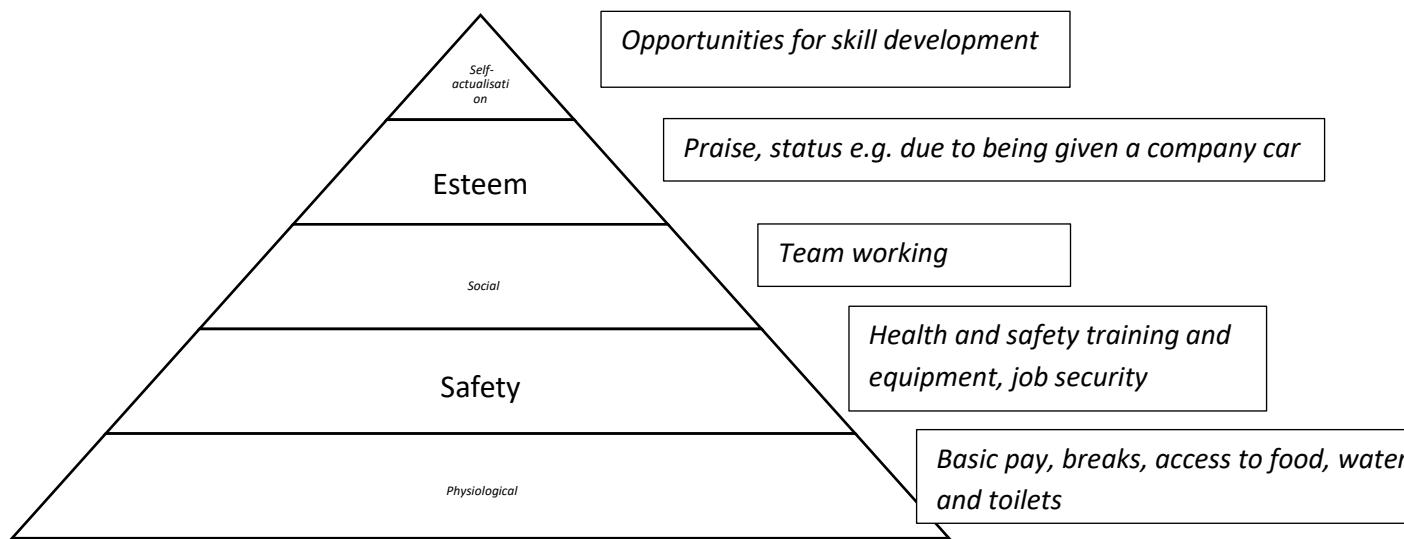
$$\text{£20,000} / (\text{£30} - \text{£0.50}) = 678 \text{ units} - \text{margin of safety} = \text{1,000} - \text{678} = \text{322 units}$$

Output level 10,000

$$\text{£20,000} / (\text{£30} - \text{£0.10}) = 669 \text{ units} - \text{margin of safety} = \text{10,000} - \text{669} = \text{9,331 units}$$

2. Below is an incomplete drawing of Maslow's hierarchy of needs. Complete the drawing and add at least one example of how a business may help its employees achieve each layer.

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3. A business is trying to choose between two projects (A and B). Net cash flow data is shown for both projects below. Figures are in millions. (Cumulative net cash flow and discounted net cash flow columns have been provided to assist you in your workings if required).

Year	Discount factor (@10%)	Net Cash Flows – Project A	Cumulative Net Cash Flows – Project A	Discounted net cash flows (A)	Net Cash Flows – Project B	Cumulative net cash flows (B)	Discounted net cash flows (B)
0	1	(15)	(15)	-15	(20)	(20)	-20
1	0.909	1	(14)	0.909	6	(14)	5.454
2	0.826	2	(12)	1.652	6	(8)	4.956
3	0.751	5	(7)	3.755	6	(2)	4.506
4	0.683	8	1	5.464	6	4	4.098
5	0.621	10	11	6.21	6	10	3.726
	Total:	11		2.99	10		2.74

3a. Calculate the payback period for each project

A: Payback occurs in **3 years and 10.5 months**

After 3 years £8m is paid back leaving £7m = (£7m/ £8m) x 12 = 10.5

B: Payback occurs in **3 years and 4 months**

After 3 years £18m is paid back leaving £2m = (£2m/ £6m) x 12 = 4

3b. Calculate the net present value for each project

A: £2.99m

B: £2.74m

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3c. Calculate the ARR for each project

A: **14.67%**

$$(\text{£}26m - \text{£}15m) / 5 = \text{£}2.2m$$

$$(\text{£}2.2m / \text{£}15m) \times 100 = 14.67\%$$

B: **10%**

$$(\text{£}30m - \text{£}20m) / 5 = \text{£}2m$$

$$(\text{£}2m / \text{£}20m) \times 100 = 10\%$$

3d. Use your answers to parts 3a to 3c to decide which project the firm should choose

Example: Project A may well be the best choice. Though it does have a slightly longer payback (although they are forecast to grow year on year) and cash inflows are initially small, it does have the larger NPV (with the given discount rate) and ARR plus it has the lower initial investment cost. Of course, investment appraisal is only useful if cash flows have been forecasted accurately and it does only include quantitative factors – not qualitative ones e.g. how necessary is it for the firm to do something (different?).