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**WORKSHEET: RO64 – LO2 Understand what makes a product of service financially viable**

All businesses produce ‘output’, output is a business term for whatever a business is producing (i.e. product or service) and is often measured in ‘units’. A unit is just one of whatever is being made (i.e. if a business makes coats, an output of 120 units per month just means that the business makes 120 coats per month).

1. Sue is a baker, she makes 100 cakes and 250 loaves of bread every day. What is her output per day in units?

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Any money that the business has to spend is called a ‘cost’. We categorise costs into three types; fixed; variable and total costs. Fixed costs are any cost that remain unchanged when output changes, whereas variable costs change in direct relation to output.

1. Identify if the following are fixed or variable costs by ticking the correct box.

|  |  |  |
| --- | --- | --- |
| **Description of cost** | **Fixed cost** | **Variable cost** |
| Rent of business premises |  |  |
| Packaging for products |  |  |
| Loan repayments to financial institution |  |  |
| Postage cost to customers |  |  |
| Components used to manufacture each product |  |  |
| Insurance for building contents |  |  |
| Salaries for managers of business |  |  |
| Raw materials used to make products |  |  |
| Utilities such as water and electricity |  |  |

The third category for costs is total costs. This is calculated by simply adding the fixed and variable costs together (i.e. Total Costs = Fixed Costs + Variable costs).

1. A factor has a fixed cost of £1000 per month, the output is 100 units per month with a variable cost of £20 per unit. What is the total cost for the factor per month?

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All businesses try to make money by selling good and service, we call this money revenue. Total revenue is all the money earned by a business through selling goods and services over a given period of time. This can be calculated through the following formula, Total Revenue = Price per unit X Output level (number of sales).

1. A shop sells products for an average of £5 per unit. If the shop sells 70 units in a day what is their total revenue?

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Most businesses will try to generate a profit (i.e. a financial gain). Profit occurs when the output of the business is creating more revenue than it costs to generate that output. The formula to calculate profit is Profit = Total Revenue – Total costs.

1. A leisure centre has fixed costs of £2,500 per day and variable costs of £1 per customer. All customers pay a flat rate of £5 to use the facilities with an average of 800 customers per day. Calculate the daily profit the leisure centre generates.

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Break-even is the level of output at which total costs are equal to total revenue (i.e. the business makes neither a profit nor a loss). Businesses conduct break-even analysis to calculate the required output in units they need to generate in order to avoid making a loss.

1. Complete the break-even chart below and then label the following on the corresponding graph: FC, VC, TC, TR, B.E.P, M.O.S

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| --- | --- | --- | --- | --- | --- |
| **Units** | **FC** | **VC** | **TC** | **TR** | **P/L** |
| 0 |  | 0 | 100 |  | -100 |
| 1 |  | 40 |  | 60 | -80 |
| 2 |  | 80 |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  | 160 |  |  |  |
| 5 |  | 200 |  |  |  |
| 6 |  |  | 340 |  | 20 |
| 7 |  |  |  |  |  |
| 8 |  |  |  |  |  |
| 9 |  |  | 460 |  |  |
| 10 | 100 | 400 |  | 600 | 100 |

