



Mock Exam One

AAT Level 3

Management Accounting Techniques

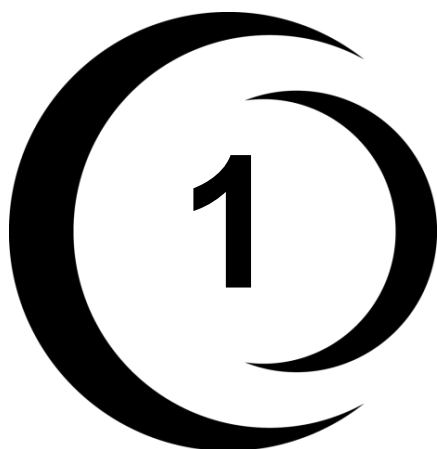
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Mock Exam One

AAT L3 Management Accounting Techniques

Task 5 and Task 6 in this mock exam must be answered using Microsoft Excel.
To complete the mock exam tasks or to review the solutions, please visit our website www.acornlive.com and choose STUDY FOR AAT (Q2022).

Assessment information:

You have **2 hours and 30 minutes** to complete this practice assessment.

- This assessment contains **6 tasks** and you should attempt to complete **every** task.
 - Each task is independent. You will not need to refer to your answers to previous tasks.
 - The total number of marks for this assessment is **120**.
 - Read every task carefully to make sure you understand what is required.
 - Where the date is relevant, it is given in the task data.
 - Both minus signs and brackets can be used to indicate negative numbers **unless** task instructions state otherwise.
 - You must use a full stop to indicate a decimal point. For example, write 100.57 **not** 100,57 or 10057.
 - You may use a comma to indicate a number in the thousands, but you don't have to. For example, 10000 and 10,000 are both acceptable.
-

Task 1 (24 marks)

This task is about costing techniques.

This task contains parts (a) and (b).

(a) (i) Complete the following sentence using the drop down list.

(1 mark)

The classification of cost which is useful for forecasting costs, in particular when activity levels rise or fall is by

Picklist: Element, Behaviour, Function, Nature.

(a) (ii) Complete the following sentence using the drop down list.

(1 mark)

An overtime premium paid to production workers is normally included as direct labour cost rather than indirect labour cost, if overtime worked was due to

Picklist: the general pressure of work, a customer's specific request.

Coffee Shop RUS (CSRUS) makes different grades of coffee beans for a national high street chain of coffee shops. CSRUS uses the FIFO (first in, first out) method to value its closing inventory. The stores ledger records for Coffee Bean Z grade (Arabica bean) shows the following receipts into stores during the month of October:

Date of purchase	Number of tonnes	Price per tonne (£)	Total cost (£)
1 October	80	900.00	72,000
7 October	200	920.55	184,110
14 October	150	950.00	142,500

(a) (iii) Calculate the cost of issuing 150 tonnes of Bean Z grade coffee beans on 20 October. Round your answer to the nearest whole pound (£).

(2 marks)

Cost of materials issued £

(a) (iv) Calculate the closing inventory balance after the issue on 20 October. Round your answer to the nearest whole pound (£).

(2 marks)

Closing inventory remaining £

(a) (v) Identify whether the following statements are TRUE or FALSE.

(4 marks)

	TRUE	FALSE
Economic order quantity is an amount ordered to minimise inventory holding and ordering costs.	<input type="checkbox"/>	<input type="checkbox"/>
Buffer (safety) stock is an inventory level at which an order is placed.	<input type="checkbox"/>	<input type="checkbox"/>
The reorder level indicates that if levels fall below this amount it signals a crisis or emergency.	<input type="checkbox"/>	<input type="checkbox"/>
The inventory balance under the FIFO method will be higher than the AVCO method during a period of rising prices.	<input type="checkbox"/>	<input type="checkbox"/>

The following budget relates to a manufacturer which makes a single product.

The manufacturer currently uses a marginal costing system.

The following details for month 5 are included below:

Details:	Month 5 £
Opening inventory (units)	0
Selling Price (£)	105
Production (units)	20000
Sales (units)	16000
Direct materials (£ per unit)	11.50
Direct labour (£ per unit)	5.25
Other variable production costs (£ per unit)	11.00
Fixed production costs (£)	120,000

(b) (i) Using the information above, complete a budgeted operating profit statement below for month 5 using marginal costing. All figures should be calculated to the nearest whole pound £. Do not use minus signs or brackets. If any answer is zero or not required, then enter '0' in the relevant cell.

(8 marks)

Marginal costing statement	Month 5 £
Sales	
Less variable cost of sales	
Opening inventory	
Production costs	
Closing inventory	
Total variable cost of sales	
Contribution	
Fixed overheads	
Profit or loss for month 5	

PF is a manufacturer of pet food. The following cost accounting codes are used in its management accounting system.

Code	Description	Code	Description
Factory 1:		Cost centres:	
2100	Direct materials	6000	Quality control
3100	Direct Labour	6100	Stores ledger control
4100	Indirect overhead	6200	Buildings maintenance
Factory 2:			
2200	Direct materials	7000	Bank
3200	Direct Labour	8000	Payables ledger control
4200	Indirect overhead	9000	Wages control

Identify the correct cost accounting entries for each of the following transactions.

(b) (ii) The return of 6 bags of cement with a total cost of £36, was sent from buildings maintenance back to stores.

(2 marks)

	Cost accounting code	£
Debit		
Credit		

- (b) (iii) The issue of 12 tonnes of beef at a total cost of £14,400 to factory 1. (2 marks)

	Cost accounting code	£
Debit		
Credit		

- (b) (iv) The posting of quality control staff salaries as an expense for the week, the total amount was £4,722. (2 marks)

	Cost accounting code	£
Debit		
Credit		

End of Task

Task 2 (24 marks)

This task is about attributing costs.

This task contains parts (a) and (b).

HTC is a manufacturer of high quality flat pack furniture which it sells to the general public. HTC operates an absorption costing system. Details for its budgeted overhead, actual overhead and activity levels for the machining department is as follows:

	Budget	Actual
Machine hours	12000	12300
Production overhead (£)	120,000	128,000


(a) (i) Calculate the budgeted overhead absorption rate for the machining department based on machine hours. Show your answer to TWO decimal places.

(2 marks)

Budgeted overhead absorption rate for the machining department £

(a) (ii) Complete the following table using your answer from (a)(i) above. All figures should be calculated to the nearest whole pound £.

(6 marks)

	Overheads incurred	Overhead absorbed	Difference absorbed	Under/over absorption
Production overhead	£	£	£	<input type="text"/> 


Picklist: Under absorption, Over absorption.

The management of HTC are considering an alternative method to calculate an overhead absorption rate in the machining department. The overhead absorption rate for the machining department based on direct labour hours is £28 per labour hour. Actual labour hours worked in the machining department was 4700 hours.

(a) (iii) Complete the following sentence. All figures should be calculated to the nearest whole pound £.

(4 marks)

If direct labour hours were used to recover overheads in the machining department, production overhead for the machining department would be

 by £

Picklist: Under absorbed, Over absorbed.

HTC makes two products, the 'elf' and the 'reindeer' for the festive season.

Budgeted overheads for two production activities are as follows:

- Materials handling overhead £400,000.
- Energy overhead £300,000.

Further information is included in the table shown below.

	Elf per unit	Reindeer per unit
Direct materials - £ per unit	7.50	8.00
Direct labour - £ per unit	15.00	35.00
Direct labour - hours per unit	3.00	5.00
Number of material requisitions	600	200
Energy consumed (Kw)	100,000	50,000
Budgeted production (units)	50000	30000

(b) (i) Complete the table shown below using activity-based costing (ABC). Each cost driver rate must be calculated and overheads apportioned to each product using appropriate cost drivers. All figures should be calculated to the nearest whole pound £.

(12 marks)

	£	Elf £	Reindeer £	Total overheads £
Cost driver per material requisition				
Cost driver per Kw				
Total materials handling cost £				£400,000
Total energy cost £				£300,000

End of Task

Task 3 (24 marks)

This task is about short term decision making.





This task contains parts (a) and (c).

A manufacturer of a single product has supplied the following budgeted data below:

Direct materials	2.3 kg at £3.50 per kg required for each unit made.
Direct Labour	£7,000 incurred for every 8000 units made.
Depreciation of machines	£3,000 incurred every quarter.
Repairs and maintenance	£15,000 incurred every year plus £1.17 for each unit made.

(a) Choose the correct description for each type of cost shown above.

(4 marks)

Cost	Type of cost
Direct materials	<input type="text"/> 
Direct Labour	<input type="text"/> 
Depreciation of machines	<input type="text"/> 
Repairs and maintenance	<input type="text"/> 

Picklist: Variable cost, Semi-variable cost, Stepped fixed cost, Fixed cost.

(b) Using the information in part (a) above. Complete the budget shown below for the monthly cost of making 13500 units. Enter figures to the nearest whole pound £.

(12 marks)

Monthly Production		
	18000 units £	13500 units £
Direct materials	144,900	
Direct Labour	21,000	
Depreciation of machines	1,000	
Repairs and maintenance	22,310	

ST makes jars of strawberry jam. The table shown below gives forecast information for the next month for each type of jam that ST plans to make. Forecast production for the next month will be the same as maximum sales demand.

Per unit	Economy Jam £	Standard Jam £	Premium Jam £
Selling Price	0.69	0.99	1.99
Direct material (strawberries)	0.20	0.80	1.20
Direct Labour	0.08	0.08	0.16
Maximum sales demand (jars sold)	10000	15000	5000
Kilograms (kg) of strawberries required each jar	0.1	0.4	0.6
Strawberries required to meet maximum sales demand (kg)	1000	6000	3000

The direct material and direct labour cost are variable costs. ST also incurs monthly fixed overhead required to support each product.

Fixed overhead to support each product:

- Economy Jam £1,500.
- Standard Jam £1,200.
- Premium Jam £2,500.

(c) (i) Calculate the break-even volume (units) each month for Economy Jam. Show your answer to the nearest whole unit.

(2 marks)

Break-even volume (units) for Economy Jam (each month)

(c) (ii) Calculate the margin of safety (units) each month for Standard Jam. Show your answer to the nearest whole unit.

(3 marks)

Margin of safety (units) for Standard Jam (each month)

(c) (iii) Calculate how many units of Premium Jam must be sold each month to achieve a target profit of £3,000. Show your answer to the nearest whole unit.

(3 marks)

Units of Premium Jam sold to achieve a target profit of £3,000 (each month)

End of Task

Task 4 (16 marks)

This task is about the principles of budgeting and cash management.

This task contains parts (a) and (e).

(a) Identify whether the following statements about cash budgets are true or false.
(4 marks)

	TRUE	FALSE
A cash budget allows management to plan for their organisations future liquidity needs.	<input type="checkbox"/>	<input type="checkbox"/>
A gain on the disposal of a non-current asset would be included as a cash receipt in a cash budget.	<input type="checkbox"/>	<input type="checkbox"/>
The part-exchange of an existing asset that is 'traded in' to fund the purchase cost of a new asset, would be included as a cash receipt in a cash budget.	<input type="checkbox"/>	<input type="checkbox"/>
Increasing the trade payables payment period for its suppliers, can temporarily improve net cash-flows for a business.	<input type="checkbox"/>	<input type="checkbox"/>

An extract from a statement of profit or loss account and the opening and closing balances of trade receivables and trade payables for the year are shown below.

Extract from statement of profit or loss for the year ended 31 Dec 20X5

	£
Sales	240,000
Purchases	<u>60,000</u>
Gross profit	<u>180,000</u>

	Opening balance 1 Jan 20X5	Closing balance 31 Dec 20X5
Trade receivables (£)	23,000	48,000
Trade payables (£)	10,000	28,000

There was no opening or closing balance of inventories for the year.

(b) Complete the table below to reconcile the gross profit to the net cash inflow/(outflow) from operating activities for the year ended 31 Dec 20X5. Use a minus sign to show a deduction, or a net cash-outflow from operating activities for the year. If any answer is zero, then enter '0' in the relevant cell.

(7 marks)

	£
Gross profit for the year	
Change in trade receivables during the year	
Change in trade payables during the year	
Net cash inflow/(outflow) from operating activities for the year	

(c) Calculate the trade receivables collection period (days) using the information in part (b) above.

(2 marks)

Trade receivables collection period (days)

(d) Identify which ONE of the following factors is more likely to explain why the trade receivables collection period for a business has increased during the year.

(1 mark)

An increase in the effectiveness of credit control.	<input type="checkbox"/>
An increase in discounts allowed for customers who pay their invoices early.	<input type="checkbox"/>
A reduction in credit terms offered to customers for the sale of goods on credit.	<input type="checkbox"/>
A decrease in discounts allowed for customers who pay their invoices early.	<input type="checkbox"/>

(e) Identify TWO actions a business can take if it has insufficient liquidity.
(2 marks)

Withdraw capital invested by the owner of the business.	<input type="checkbox"/>
Dispose of non-current assets.	<input type="checkbox"/>
Increase credit terms offered to customers.	<input type="checkbox"/>
Delay payments to suppliers.	<input type="checkbox"/>
Repay the business overdraft.	<input type="checkbox"/>

End of Task

Task 5 must be answered using Microsoft Excel.

To complete this mock exam task please visit our website www.acornlive.com and choose STUDY FOR AAT (Q2022).

Task 5 (16 marks)

A college operates both academic and professional courses for students.

It is preparing an overhead budget for the next year. Budgeted overheads have already been allocated or apportioned to each profit and cost centre using the most appropriate basis.

Budgeted overheads for cost centres have not yet been reapportioned to the two profit centres. The college uses the direct method for overhead reapportionment.

IT support cost is reapportioned between the two profit centres using the total number of tickets issued.

Human resource cost is reapportioned between the two profit centres using only the number of employees in each profit centre.

Facilities management cost is reapportioned between the two profit centres using the total number of maintenance hours.

Task instructions

Complete the following in the 'Overhead Analysis' worksheet.

(i) Include Data Validation in cells B13:B16 to ensure that only text from cells L2:L8 can be entered from a list. (2 marks)

(ii) When Data Validation is included in cells B13:B16 from part (i) above. Select in cells B13:B16 from the Data Validation list, the basis for how budgeted overhead has been allocated or apportioned to the profit and cost centres. (4 marks)

(iii) Complete any remaining figures in the overhead analysis table in cells A11:H22. All cells completed must use formulas. Formulas may include data included in cells A1:G9 in the 'overhead analysis' worksheet. Do not enter any figures in grey cells. (6 marks)

(iv) Use 'Conditional Formatting' in cell H22. Include a rule that if the value in cell H22 is equal to the value in cell H18, then the font colour in cell H22 will turn green. Include a rule that if the value in cell H22 is not equal to the value in cell H18, then the font colour in cell H22 will turn red. (2 marks)

(v) Use 'Protect Sheet' to ensure that the overhead analysis table in cells A11:H22 cannot be edited and that all other cells in the worksheet can be edited. Do not use a password. (2 marks)

Task 6 must be answered using Microsoft Excel.

To complete this mock exam task please visit our website www.acornlive.com and choose STUDY FOR AAT (Q2022).

Task 6 (16 marks)

Task instructions

Complete the following in the 'Operating Statement' worksheet.

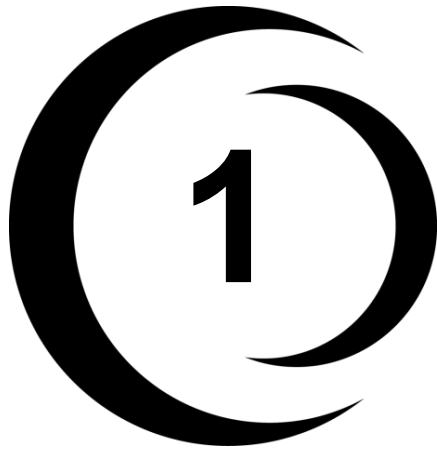
(i) Use formulas in cells B2:B4 to construct a flexed budget. Your formula must use the data provided in cells B9:C11. (3 marks)

(ii) Use formulas in cells D2:D5 to calculate each variance by comparing the flexed budget and actual results achieved. Adverse variances must be shown as a negative figure using a minus sign. (4 marks)

(iii) Use formulas in cells E2:E6 to calculate each variance as a percentage of budget. Format cells E2:E6 as a percentage and round each percentage to one decimal place. (2 marks)

(iv) Enter in cells F2:F6 a nested IF statement, that displays the text "Favourable", "Adverse", or "No variance" depending on each variance calculated in cells D2:D6. (3 marks)

(v) Produce a 2-D column chart that shows each variance in cells D2:D6 and a description of each variance using cells A2:A6. Include a chart title called 'Variances £'. Change the fill colour to red, for the bar that has the largest adverse variance. (4 marks)



Revision Notes

Cost classification

By element

- Materials e.g. items with physical substance.
- Labour e.g. wages paid to workers.
- Overheads e.g. all other expenses.

This classification represents a simple way to understand the cost of making a good or performing a service.

By function

Cost classification by function would group costs according to the purpose of each type of expenditure. Costs are analysed as either production (factory) or non-production (non-factory) costs. This classification is useful to a financial accountant that wants to code expenses for the purpose of reporting profits.

By nature

Cost classification by nature would group costs according to those which specifically form part of making a good or performing a service (direct costs or product costs) and those costs which are considered too remote and untraceable to goods made or services performed (indirect costs or period costs). This classification is useful for product costing.

	Fast food	Hospital	Car maker	Coffee shop
Production costs				
Direct materials	Burger, bun, onions and sauces.	Bandages, medicines and treatments.	Steel, car components and rubber tyres.	Coffee cups, coffee beans, milk and sugar.
Direct labour	Cooks, servers and cashiers.	Doctors, nurses and surgeons.	Car assembly workers.	Barista's.
Indirect materials	Cleaning fluids, toilet roll, bleach and napkins.	Plastic bin liners, anti-bacterial gel and disposable wipes.	Machine lubricants, oils and equipment cleaning fluids.	Cleaning fluids, toilet roll, bleach and napkins.
Indirect labour	Restaurant managers, supervisors and cleaners.	Hospital managers, supervisors, porters and patient administrators.	Factory managers, supervisors and quality control inspectors.	Restaurant managers, supervisors and cleaners.
Indirect expenses	Restaurant rent, rates, insurance, light and heat.	X-Ray machines, treatment equipment and beds. Also building costs.	Factory rent, light and heat, insurance and cost of plant and machinery.	Restaurant rent, rates, insurance, light and heat.

By behaviour

Cost classification by behaviour would group costs according to how they change (or behave) as a result of the volume of goods or services increasing or decreasing. This classification is useful for budgeting (forecasting) costs for different amounts of a good made or service performed.

Variable cost

A variable cost is a total cost that 'varies' when the volume of a product changes. Raw materials and production labour to make a product are examples of a variable cost.

- When no volume of a product is made the total cost will be zero.
- When more volume of a product is made the total cost will rise.
- When less volume of a product is made the total cost will fall.

Fixed cost

A fixed cost is a total cost that remains unchanged when the volume of a product changes. Periodic expenses such as rent, light and heat, supervisor salaries are examples of a fixed cost.

- When no volume of a product is made the total cost will remain the same.
- When more volume of a product is made the total cost will remain the same.
- When less volume of a product is made the total cost will remain the same.

Summary

	Variable cost	Fixed cost
Total cost (£)	Increases when more units are made and decreases when less units are made.	Remains the same when more or less units are made.
Unit cost (£)	Remains the same when more or less units are made.	Decreases when more units are made and increases when less units are made.

Stepped fixed cost

Fixed cost tends to be stepped in nature because when the volume of a product made exceeds a certain level of production, then more resources such as supervisors, machines and buildings are required which increase fixed costs.

Semi-variable cost

A semi-variable (or mixed) cost is a total cost that contains a mixture of both fixed and variable components. For example, a factory may pay a fixed (standing) charge for its energy required each month up to a certain limit of energy consumed and then pay additional charges for more energy when this limit has been exceeded.

The high-low method

The high-low method is a mathematical technique and is useful when a total cost is a semi-variable (or mixed) cost, but the amount of variable cost and fixed cost is unknown. It is called the high-low method because it would use only the total cost for the highest and lowest production volumes in its calculations, all other data would be ignored.

- **Step 1** The highest and lowest volume and total cost is placed together.
- **Step 2** The variable cost per unit can be identified from the difference in step 1.
- **Step 3** The fixed cost can be identified after step 2 as a balancing figure.

Responsibility centres

Cost centres

A cost centre is normally a department, function or any part of an organisation where costs can be charged for accounting purposes. Cost centres do not generate income therefore a manager has the responsibility only to minimise or control costs.

Revenue centres

A revenue (or sales) centre is a distinct part of an organisation where the manager has the responsibility only to maximise sales income.

Profit centres

Profit centres focus on maximising sales income and minimising or controlling costs, in order to maximise profits. The manager has control over sales income generated and expenditure incurred.

Investment centres

An investment centre is essentially the same as a profit centre but with one more additional area of responsibility for a manager. The manager is expected to maximise profits and accountable to make long-term investment decisions such as investing in new premises, new machinery and new vehicles.

Summary

Management responsibility	Cost centre	Revenue centre	Profit centre	Investment centre
Costs	✓	n/a	✓	✓
Sales	n/a	✓	✓	✓
Assets and liabilities	n/a	n/a	n/a	✓

Cost coding

Costs incurred by an organisation can be analysed and allocated to different products, services, departments, factories, shops, branches or divisions. Cost coding in an accounting system will enable efficient and consistent data processing. Costs can be segmented and the trends identified and better understood by management.

Examples

- Numeric (codes use numbers only).
- Alphabetic (codes use letters only).
- Alpha-numeric (codes use a mixture of numbers and letters).

Costing for materials

First-in-first-out (FIFO)

FIFO is a 'selection' method to determine what raw materials were used during a period of time. FIFO determines an issue cost for raw materials by selecting the 'earliest' or 'oldest' inventory that has been purchased.

The relevance of FIFO

If a raw material has a very short shelf life such as milk, it can perish very quickly and will be wasted. Selecting the oldest (earliest) inventory first ensures that any remaining closing inventory has a longer shelf life.

Last-in-first-out (LIFO)

LIFO is a 'selection' method to determine what raw materials were used during a period of time. LIFO determines an issue cost for raw materials by selecting the 'latest' or 'newest' inventory that has been purchased.

The relevance of LIFO

LIFO selects the newest (latest) purchases for materials used which represents the current cost and most up-to-date raw material prices recognised for a production cost.

Weighted average cost (AVCO)

The weighted average cost (AVCO) method calculates an average price for all purchases that exist on the date of each issue, the average price is used to work out the cost of raw materials issued to production.

The relevance of AVCO

AVCO works in situations where a raw material is a liquid or gas, it would be impractical to select what purchases were actually used for production, since what was used would be uncertain. AVCO is also a good accounting method when prices of raw materials are seasonal or volatile. An average price calculated for all raw materials issued for production will smooth out production costs for each period.

Summary

Accounting method	How the issue cost for raw material is determined	Practical situations to use this accounting method	Implications when raw material prices are rising
FIFO	Selects the 'earliest' or 'oldest' inventory purchased.	Raw materials are highly perishable and must be used quickly.	Selects the earliest and cheapest purchases. FIFO gives the lowest issue cost and the highest value of closing inventory.
LIFO	Selects the 'latest' or 'newest' inventory purchased.	Most up-to-date current cost recognised for raw materials issued.	Selects the latest and most expensive purchases. LIFO gives the highest issue cost and the lowest value of closing inventory.
AVCO	Average price is calculated for all inventory held on the date of each issue.	Gas (or liquids) mixed together, or volatile raw material prices.	Average price is calculated for all inventory held on the date of each issue. AVCO gives neither the highest or lowest issue cost, or value of closing inventory.

Stores (inventory) records

A stores ledger is a manual (paper) or computer record kept for raw materials stored by a warehouse (or stores). It records details of raw materials purchased (received) and issued (sent) to production, as well as a cumulative balance for available inventory.

The following documents may be kept to update inventory records.

- A goods received note (GRN) would record goods received from suppliers by a warehouse (store).
- A materials requisition form records internal requests from production for a warehouse to issue (send) raw materials for the production of finished goods.

Example of a stores (inventory) ledger

Date	Receipt			Issue			Balance	
	Quantity (kg)	Cost per kg (£)	Total cost (£)	Quantity (kg)	Cost per kg (£)	Total cost (£)	Quantity (kg)	Total cost (£)
Balance at 1 April							200	20,000
11 April	400	105.00	42,000				600	62,000
22 April				250	105.00	26,250	350	35,750

The stores ledger control account

The stores (materials) ledger control account records the accounting entries for all inflows and outflows of material inventory in each accounting period. It is called a control account because it controls the total of all entries for direct and indirect materials. The stores ledger control account represents an 'asset' and is part of a double entry system, so it is debited to increase the inventory balance and credited to decrease the inventory balance. The balance carried down (c/d) at the end of each accounting period, represents the cost of unused raw materials and is an asset owned by the business.

Stores ledger account (asset)

Details	Amount £	Details	Amount £
Balance b/d (opening inventory)	10,700	Purchases ledger control (purchases returns)	1,200
Purchases ledger control (purchases on credit)	56,990	Direct costs (materials relating to products)	54,900
Bank (purchases paying cash)	5,622	Indirect costs (materials non-specific to products)	1,561
Direct costs (return of materials from production)	560	Balance c/d (closing inventory)	16,211
	73,872		73,872

Exam tasks may require you to prepare journal entries for a stores (materials) ledger control account.

Materials purchased from suppliers on credit £56,990.

- **Debit** Stores ledger control (**increase asset**)
- **Credit** Purchase ledger control (**increase liability** to pay suppliers)

Purchases returns from stores back to credit suppliers £1,200.

- **Debit** Purchase ledger control (**decrease liability** to pay suppliers)
- **Credit** Stores ledger control (**decrease asset**)

Materials purchased from suppliers for cash (not on credit) £5,622.

- **Debit** Stores ledger control (**increase asset**)
- **Credit** Bank (**decrease asset**)

Payment of credit suppliers (not an entry to the stores ledger account).

- **Debit** Purchase ledger control (**decrease liability** to pay suppliers)
- **Credit** Bank (**decrease asset**)

Direct materials issued from stores (warehouse) to production £54,900.

- **Debit** Direct material costs (**increase expenses**)
- **Credit** Stores ledger control (**decrease asset**)

Direct materials returned from production to stores £560.

- **Debit** Stores ledger control (increase asset)
- **Credit** Direct material costs (decrease expenses)

Direct materials issued (used) are raw materials that form part of the product and are charged as direct cost for the accounting period.

Indirect materials issued from stores to production £1,561.

- **Debit** Indirect costs (increase expenses)
- **Credit** Stores ledger control (decrease asset)

Indirect materials issued (used) are materials that do not form part of the product and are charged as indirect cost (production overhead) for the accounting period.

Inventory (stock) control

- **Continuous review systems** order the same (fixed) quantity of inventory each time actual levels fall below a reorder level. Continuous systems order a fixed quantity at variable intervals of time.
- **Periodic review systems** check inventory levels at fixed intervals of time such as at the end of each week or at the end of each month.

Inventory control measures

The following inventory measures exist to regulate and control inventory levels in a continuous inventory review system.

Re-order level

A re-order level would be used in a continuous review system and the level (amount) is set by management. If actual inventory amounts fall below the re-order level, then a fixed order quantity is placed with a supplier for replenishment.

The re-order level is calculated as (average usage x average lead time) + buffer. The average usage is the average amount of materials used each day. The average lead time is the average number of days a supplier takes to deliver, each time an order is placed.

Maximum inventory level

The maximum amount of inventory that would ever be needed at any present point in time and any more kept would be considered wasteful. The maximum inventory level is calculated as the buffer + maximum re-order quantity.

Minimum inventory level (also called buffer or safety stock)

The minimum amount of inventory (a 'buffer') that is stored as a precaution (or 'just in case') a supplier delivery takes longer than normal. If actual inventory amounts fall below the buffer level, it would signal a crisis or emergency because raw material inventory would be running dangerously low. The minimum inventory level is calculated as the re-order level - (average usage x average lead time).

Re-order quantity

A re-order quantity is a fixed amount of inventory that is ordered from a supplier, each time an order is placed. A re-order quantity would be used in a continuous review system and different methods exist to calculate this amount.

Examples of a re-order quantity

- **Maximum order quantity** is the most inventory that should ever be ordered. The calculation is the maximum inventory level - buffer.
- **Minimum order quantity** is the least inventory that should ever be ordered. The calculation is the reorder level - buffer (also calculated as the average usage x average lead time).

Economic order quantity (EOQ)

EOQ (like a minimum and maximum order quantity) calculates an amount to order from a supplier, each time an order is placed. EOQ is a calculation of the most economic quantity to order from a supplier, it aims to minimise the total of all holding and ordering costs for inventory.

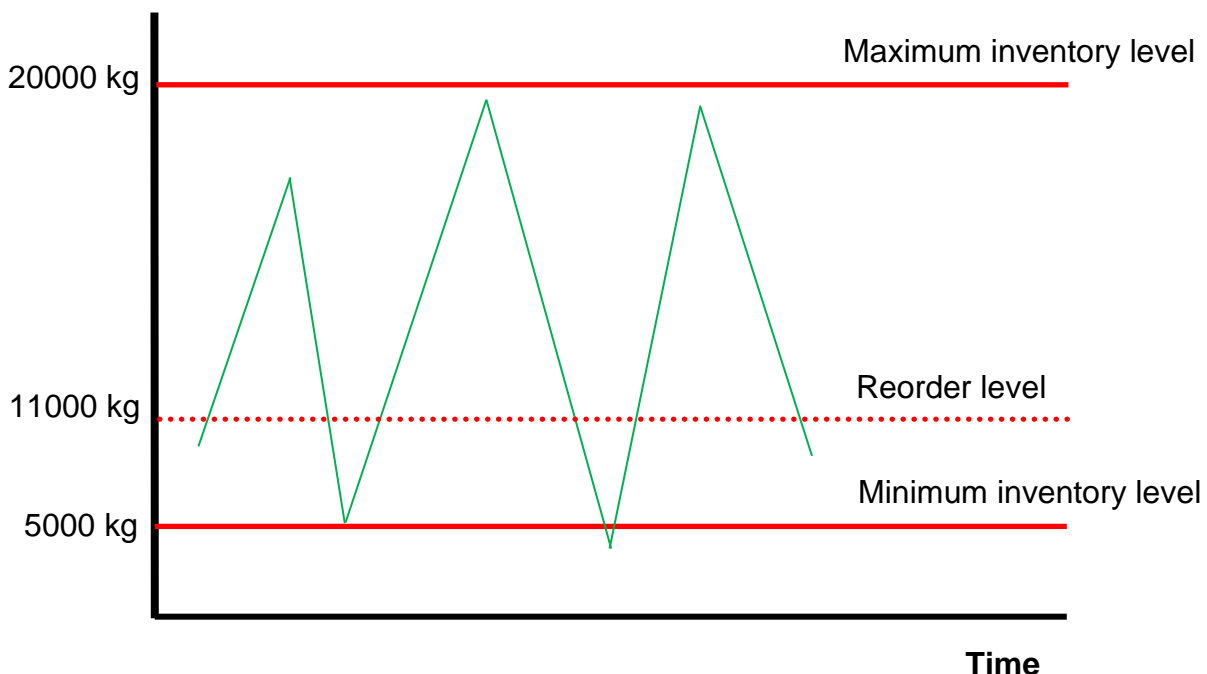
The EOQ formula can be remembered as the square root ($\sqrt{}$) of 2 COD ($2 \times Co \times D$) divided by CHIPS (Ch).

EOQ formula

$$EOQ = \sqrt{(2 \times Co \times D) \div Ch}$$

- Co = Cost of each order.
- Ch = Cost of holding one unit each year.
- D = Annual demand.

Example of an inventory control chart



Costing for labour

Time rate systems

Labour (employees) can be paid a salary (a fixed monthly payment) or wages (based on hours worked).

Overtime payment and overtime premium

- An **overtime payment** is the amount paid per hour for overtime worked by an employee (the basic rate plus 'premium' rate per hour).
- An **overtime premium** is the 'excess amount' paid above the 'basic rate' for overtime worked by an employee (the overtime rate less basic rate per hour).

A production employee is a worker who makes and assembles a good, or performs a service. The basic cost of all hours worked by production employees is treated as direct labour expenses. The cost of overtime premium can be treated as direct labour cost or indirect labour cost, depending on reasons why overtime was worked.

The general rule is that if overtime is undertaken due to the general pressures of work, then overtime premium is treated as indirect labour expenses. This would include staff shortages, or a sudden increase in customer demand. However, if a customer requests an urgent order during a busy period and it cannot be fulfilled without working overtime, the cost of overtime premium can be treated as direct labour expenses.

Piecework rate systems

Production workers are paid a fixed rate for each unit they make, irrespective of the number of hours they work e.g. a packing worker paid a fixed rate for each box they pack. Piecework rate systems reward production workers who are more productive because the more they make, the more they get paid.

- Single rate piecework systems pay a production worker a single (fixed) rate for each unit they make. The same rate is paid for each unit made.
- Split (or differential) rate systems pay a production worker higher rates for units achieved above thresholds or targets set by management.

Minimum payments

Piecework rate systems do not guarantee security of income. A minimum wage can be paid to a worker, if their income falls below the guaranteed minimum wage.

Advantages of piecework

- Encourage a greater speed of work.
- Certainty for labour costing, the organisation pays a variable cost for each unit.

Disadvantages of piecework

- Lack of security for income.
- Penalise workers for low productivity.
- Can deliver poor quality of work e.g. rushing to speed up production.

Bonuses

A bonus is a sum of money added to a workers wages as a reward for good performance. Bonuses can be paid to production workers who achieve more than a specified target for units made or services performed, a bonus is not guaranteed unless a target is exceeded and this incentivises and rewards good performance. There is no hard or fast rules for how a bonus scheme works and the exam task will always explain the details if calculations are required.

Examples of bonus systems

- Bonus paid for each unit made in excess of a production target.
- Bonus paid for the percentage of units made in excess of a production target.
- Bonus paid for production time saved (hours) compared to a target.

The wages control account

A wages control account is a 'liability' account representing net salaries (money) owed to employees, it also records the total summary from payroll reports such as amounts owed to HMRC (income tax and national insurance), pension contributions and trade union subscriptions. The purpose of the wages control account is to ensure that all payroll transactions have been recorded accurately in the general ledger. The exam will not require income tax and national insurance to be calculated. A proforma wages control account is shown below.

Wages control account (liability)

Details	Amount £	Details	Amount £
Bank (payment of employee wages)	177,299	Direct costs	54,900
		Indirect costs	122,399
	177,299		177,299

Exam tasks may require you to prepare basic journal entries for a wages control account.

Payment of wages to employees for the period £177,299.

- **Debit** Wages control account (decrease liability)
- **Credit** Bank (decrease asset)

Direct labour costs for the period £54,900.

- **Debit** Direct costs (increase expenses)
- **Credit** Wages control account (increase liability)

Indirect labour costs for the period £122,399.

- **Debit** Indirect costs (increase expenses)
- **Credit** Wages control account (increase liability)

Costing for indirect costs (overheads)

Indirect costs cannot specifically be identified to and do not form part of making a product or performing a service. Also called period costs because these costs are paid normally each week, month or quarter e.g. rent, light and heat, supervisors salaries.

The process of absorption costing

Overhead absorption rates are useful to determine a full production cost for goods made and for the recovery of indirect production overheads incurred during each accounting period.

The process of absorption costing

At the beginning of each accounting period.

1. Budgeted production overhead (indirect costs) is allocated or apportioned to production cost centres and service cost centres.
2. Budgeted production overhead (indirect costs) is then reapportioned from service cost centres to production cost centres.
3. Budgeted overhead absorption rates are calculated for each production cost centre.

At the end of each accounting period.

4. Actual production overhead (indirect cost) is recovered from production cost centres using budgeted overhead absorption rates. Any under or over recovery of actual production overhead is transferred to the profit or loss account at the end of each accounting period.

The **first step** in the process of absorption costing starts at the beginning of each accounting period. Budgeted production overhead is either allocated (given) directly to a cost centre, or apportioned (shared) between cost centres. There is no hard or fast rules for how overheads are allocated or apportioned between cost centres, but it should be done on a fair and reasonable basis.

Examples of apportioning (sharing) overheads between cost centres

- Carrying value (book value) of non-current assets in each cost centre to 'share' depreciation charges.
- Market value of non-current assets in each cost centre to 'share' insurance cost.
- Number of employees in each cost centre to 'share' supervision costs and other staff expenses.
- M² (floor area) in each cost centre to 'share' factory rent, buildings maintenance, and light and heat.

Apportioning means sharing (or dividing) an overhead between cost centres. An overhead can also be allocated (given directly) to a cost centre, if the overhead solely belongs to that cost centre.

Reapportioning overheads from service to production cost centres

The **second step** is to reapportion budgeted production overheads that have been allocated and apportioned to service cost centres, to production cost centres. The calculations are similar to how you would apportion overheads in the first step.

Examples of reapportioning overheads from service to production cost centres

- Number of material issues (or the value of material issues) to each cost centre, to reapportion overhead for a warehouse.
- Hours worked by the machine maintenance department for each cost centre, to reapportion overhead for a maintenance department.
- Number of quality control (QC) inspections by the QC department for each cost centre, to reapportion overhead for a QC department.
- Number of employees in each cost centre, to reapportion overhead for a staff canteen.
- Number of purchase orders handled for each cost centre, to reapportion overhead for a purchasing department.

Two methods exist to reapportion overheads from service to production cost centres.

- **Direct method** ignores any work that a service cost centre does for other service cost centres, and therefore reapportions overheads from a service cost centre directly to production cost centres.
- **Step down method** recognises some work that a service cost centre does for other service cost centres, and therefore reapportions overheads from a service cost centre to production cost centres and service cost centres.

Overhead absorption rates

The **third step** in the process of absorption costing starts at the beginning of each accounting period. Overhead absorption rates are calculated to recover overheads during the accounting period. Three accounting methods exist to calculate an overhead absorption rate.

Budgeted indirect overheads divide by either:

- Budgeted units.
- Budgeted labour hours.
- Budgeted machine hours.

Absorption and the under or over recovery of production overheads

The **fourth step** in the process of absorption costing is that actual production overhead (indirect cost) is recovered from each production cost centre during the accounting period, using a budgeted overhead absorption rate (OAR). Any under or over recovery of production overhead will be transferred to the profit or loss account at the end of each accounting period. A production overhead control account is a ledger account kept for each production cost centre, to record actual overhead and its recovery (absorption) to the profit or loss account for the accounting period.

Double entry for a production overhead control account

1. Actual production overhead is debited to a production overhead control account.
2. Actual production overhead is absorbed (recovered) to the profit or loss account by crediting the production overhead control account. The amount recovered would be the budgeted overhead absorption rate multiplied by the actual activity.
3. Any under or over absorption (recovery) of production overhead at the end of each accounting period is transferred to the profit or loss account. The production overhead control account is closed.

Under absorption (under recovery) of production overhead

If actual production overhead (debit entry) is more than the absorbed (recovered) production overhead (credit entry) at the end of each accounting period, the under recovery will be credited to the production overhead control account and debited to the profit and loss account.

Causes of under absorption

- Actual activity (used to absorb overhead) was less than the budgeted activity.
- Actual overhead was more than budgeted overhead.

Over absorption (over recovery) of production overhead

If actual production overhead (debit entry) is less than the absorbed (recovered) production overhead (credit entry) at the end of each accounting period, the over recovery will be debited to the production overhead control account and credited to the profit and loss account.

Causes of over absorption

- Actual activity (used to absorb overhead) was more than the budgeted activity.
- Actual overhead was less than budgeted overhead.

Activity-based costing

Activity-based costing (ABC) is a management accounting concept that originated in the 1980s and is the modern alternative to absorption costing. Absorption costing (AC) is a traditional and much older management accounting practice.

Contrasting ABC with AC

- Absorption costing attributes overhead to production cost centres and calculates overhead recovery rates using either units, labour hours or machine hours to recover production overhead.
- Activity-based costing attributes overhead to cost pools and calculates overhead recovery rates using suitable cost drivers to recover production overhead.

A cost driver is an activity that most likely causes overhead in a cost pool to be incurred. ABC focuses on support activities to make products and assumes that support activities are responsible for driving production overhead.

The process of activity-based costing

1. Cost pools are set up at the beginning of each accounting period that contain budgeted production overhead (indirect cost) that is related to the same type of activity that is most likely to drive it (the 'cost driver').
2. Budgeted production overhead (indirect cost) for each cost pool is divided by its budgeted cost driver activity, to calculate a budgeted overhead rate per cost driver.
3. Actual overhead (indirect cost) is recovered from each cost pool during the accounting period. The amount recovered (absorbed) would be the budgeted overhead rate per cost driver x the actual activity for the cost driver.
4. Any under or over recovery of actual production overhead from each cost pool is transferred to the profit or loss account at the end of each accounting period.

Examples of cost pools and suitable cost drivers

- Energy cost pool driven by units (kilowatts) of energy consumed.
- Supervision cost pool driven by direct labour hours worked.
- Warehouse cost pool driven by the number of material issues to production.
- Machine maintenance cost pool driven by machine maintenance hours.
- Quality control (QC) cost pool driven by the number of QC inspections.
- Production support cost pool driven by the number of machine set ups performed for production.
- Purchase administration cost pool driven by the number of purchase orders handled for production.

Prime, marginal and full absorption cost

The unit cost is the cost of making one unit of a product (or performing one unit of a service). A prime, marginal or full absorption cost per unit can be calculated. A product (unit) cost is useful to determine a selling price, to calculate profit earned for each unit sold and to value closing inventory of finished goods.

Prime cost

The prime cost is the 'total direct cost' of production and includes the direct material cost (raw materials that form part of the product) and the direct labour cost (wages for production workers to make the product). Prime cost is a variable cost. The prime cost excludes all indirect cost (production overhead) to make a product.

Marginal cost

The marginal (variable) production cost includes the prime cost (explained above) and the variable indirect cost (production overhead) to make a product. The marginal (variable) production cost excludes all indirect fixed cost (production overhead) to make a product.

Full production cost

The full absorption cost includes the prime cost, the variable indirect cost and fixed indirect cost (production overhead) to make a product.

A unit cost normally ignores non-factory (non-production) cost such as administration, finance, selling and distribution expenses, these expenses are considered too remote to be identified a product cost. The table below shows a summary of how each costing method treats cost, either as a cost that forms part of the product (a product cost) or a cost that is excluded and treated as a period cost.

	Prime Cost	Marginal Production Cost	Full Production Cost
Direct Material	Product Cost	Product Cost	Product Cost
Direct Labour			
Production overhead (variable)	Period Cost	Period Cost	Period Cost
Production overhead (fixed)			
Non-production overhead			Period Cost

A product cost forms part of the production cost of goods and is included in the value of closing inventory. A period cost is written off in full to the profit or loss account.

Marginal costing (MC) versus full absorption costing (AC)

The difference between MC and AC

	Absorption costing	Marginal costing
Valuation of finished goods inventory	Full production cost.	Variable production cost.
Absorption of production overhead	Absorbs (recovers) production overheads to product cost.	Does not absorb (recover) production overheads.
Profit (operating) statements	Production cost is calculated to arrive at profits earned.	Variable production cost is calculated to arrive at contribution earned.
Treatment of period costs	Non-production overheads.	Fixed production overheads and non-production overheads.

Profit statement using full absorption costing

Absorption costing statement	£
Sales	
Less production cost of sales	
Opening inventory	
Production costs	
Closing inventory	
Total production cost of sales	
Profit or loss for month 1	

Profit statement using marginal costing

Marginal costing statement	£
Sales	
Less variable cost of sales	
Opening inventory	
Variable production costs	
Closing inventory	
Total variable cost of sales	
Contribution	
Fixed production costs	
Profit or loss for month 1	

The concept of contribution

Marginal costing is one of the best accounting methods to support short-term decision making because it uses the concept of contribution for reporting profits. Contribution means sales earned less all variable costs. It identifies how much sales income is available after all variable costs have been recovered. Contribution simply means 'contribution towards fixed cost and profit'.

The marginal (or variable) cost means the additional cost incurred to sell one more unit of a product or service, the marginal cost means the variable cost and would exclude all fixed cost. Fixed cost is normally considered irrelevant to short-term decision making because regardless of the volume of product or service sold, a fixed cost typically does not change.

Job costing

Job costing can be used when the production environment consists of making products that are unique and specific to each customer order. A high degree of variation exists for each job which is custom made or 'tailored' to the specific needs of each customer e.g. each building ('job') is purpose built specifically for each customer, or each printing job is specific to the needs of each customer order. In a job costing environment, the unit cost is the cost of each job.

Batch costing

Batch costing can be used when the production environment consists of making a variety of various products, in short production cycles. Identical products are made for each batch and production repeated, depending on the popularity and demand for the products an organisation makes.

Service costing

In the case of services performed rather than products manufactured, a unit cost can be calculated for each service performed.

Examples of service costing

- Cost per meal served in a restaurant.
- Cost per patient treated by a hospital.
- Cost per student for a college.
- Cost per journey for a transport company.

Service organisations may also use 'composite cost units' that comprise two cost activities (or components) to determine the cost of a service performed. A composite cost per unit means that the cost unit is made up of two parts or elements.

Examples of a composite cost per unit

- Cost per guest per day for a hotel.
- Cost per tonne per mile for a transport company.

Budgets

A budget is an estimate of income and costs for a future period of time.

Rolling (continuous) budgeting

Rolling (continuous) budgeting is a budget that is updated on a regular and frequent basis. This type of budgeting continually adds a future budget period, as earlier budget periods expire (occur) for example, if an organisation prepares a budget for 3 months (month 1-3), when month 1 has expired, a budget is prepared for month 4, to include a constant and updated three month 'rolling' forecast (month 2-4). Rolling budgets are good for adaptive planning, when budgets need to be regularly updated to account for changes in an uncertain business environment. The budget assumptions and plans are being continually revised and questioned.

The opposite approach to rolling budgets is periodic budgeting, which means a budget that is not revised until an entire budget period has expired for example, if an organisation prepares a budget for 3 months (month 1-3), when month 1-3 has expired, a budget is prepared for month 4-6. Periodic budgeting is more relevant to a stable business environment whereby greater certainty about the future exists. The budget is not revised or changed so frequently, but should still remain fairly accurate.

Standard price and standard cost

A standard price is a planned (budgeted) selling price for a product or service, which is assumed to hold good based on 'expected' market conditions. A standard cost is a planned (budgeted) unit cost for a product or service, which is assumed to hold good based on 'expected' efficiency and cost levels. A standard price (or cost) can help to prepare a more accurate budget, give more meaningful variances and motivate management and workers to achieve goals and targets.

Fixed budgeting

A fixed budget provides details of income and costs based on a single volume of units sold. The original budget is not subsequently changed even if actual units sold turn out to be different. A fixed budget is an inflexible approach and only useful if actual results are not expected to vary significantly from the original budget.

Flexible budgeting

Flexible budgeting is the opposite to fixed budgeting, this approach constructs several versions of a budget based on different volumes of units sold. This approach is useful if actual sales results are likely to vary significantly from the budget, it helps management plan more effectively in conditions of high uncertainty.

Flexed budgets

Budget and actual income and costs need to be compared on a like for like basis to calculate any meaningful variances for management. Flexing a budget means revising an original budget, to be based on the actual sales volume achieved.

Variance analysis

Variance analysis is a process that compares a budget to actual income and costs, any differences are highlighted as 'variances' and this information is used by management to improve operational performance.

- Variances are differences between actual and budgeted revenue and costs.
- Variances can be calculated as an actual amount (£) or as a percentage (%) of budget ($\text{Variance} \div \text{Budget} \times 100\%$).
- Variances can be either zero, adverse or favourable.

Interpreting the effect of variances

- **Adverse** variances mean that performance was **worse than expected** when actual results are compared to a budget.
- **Favourable** variances mean that performance was **better than expected** when actual results are compared to a budget.
- **Zero** (no variance) means performance was **the same** when actual results are compared to a budget.

Income and costs work in the opposite direction if interpreting whether a variance is better (favourable) or worse (adverse) than expected.

Income variances

- Favourable if actual income is **greater than** budgeted income.
- Adverse if actual income is **less than** budgeted income.

Cost variances

- Favourable if actual cost is **less than** budgeted cost.
- Adverse if actual cost is **greater than** budgeted cost.

Examples that cause adverse sales income variances

- Seasonal decrease in product prices.
- Economic (business) recession.
- Discounts to selling prices.
- More intense competition.

The above factors are likely to cause the selling price of the product to fall and vice versa for a rise in selling price.

Examples that cause an adverse direct material cost variance

The purchase price of raw material may increase due to:

- Using a different supplier.
- An unexpected industry price rise for raw materials.
- A shortage of raw materials in the industry.
- Higher quality of raw materials purchased.
- Seasonal fluctuations in raw material prices.

Materials usage may increase due to:

- Inferior quality of raw materials purchased which creates more wastage.
- Lower skilled labour overusing or wasting raw materials.
- Poor quality machinery and equipment overusing or wasting raw materials.

Causes of favourable direct material cost variances would be the opposite to the reasons above.

Causes of an adverse direct labour variance

The wage rate per hour for production workers may increase due to:

- Unexpected pay rises given to production workers.
- More overtime hours worked than normal (more paid per hour).
- A shortage of labour in the industry increasing wage rates.

The time taken by production workers may increase due to:

- Inferior quality of raw materials slowing down production workers.
- Lower skilled labour being less efficient and taking longer.
- Poor quality of machinery and equipment slowing down production workers.

Causes of favourable direct labour cost variances would be the opposite to the reasons above.

Causes of an adverse overhead cost variance

Overheads may increase due to:

- Rent increases e.g. the business moves into larger premises.
- Seasonal effects e.g. cost of heating and lighting increasing in the winter.
- Unexpected salary increases for production managers and supervisors.

Reporting significant variances

A significant variance means the variance amount or percentage is substantial enough for management attention and review. Reporting only significant variances to management saves them the time and effort of reviewing and investigating variances that are considered too small or trivial for management attention. There is no objective answer to what a 'significant variance' is when considering its size or percentage, this would depend on management policy.

Break-even analysis

Break even analysis is also referred to as cost-volume-profit (or CVP) analysis and is a useful tool that can support product planning decisions. Break-even analysis uses a marginal costing approach to calculate the number of units sold, that will earn no profit or loss. There are several formulas that need to be learned for your exam.

Contribution per unit (£) = Selling price per unit **less** Variable cost per unit.

Break-even volume (units) =
$$\frac{\text{Fixed overhead}}{\text{Contribution per unit}}$$

Break-even revenue (£) = Break-even volume (units) x Selling price per unit.

The break-even point can be expressed either as the break-even sales revenue (£) or break-even volume sold. Both formula calculate a figure that express no profit or loss. The break-even point is also the point where sales income is equal to total cost (total variable and fixed cost), since no profit or loss is made.

Margin of safety (units)

Margin of safety (units) = Budgeted (or actual) sales volume - Break-even sales volume.

Margin of safety (revenue)

Margin of safety (£) = Budgeted (or actual) sales revenue (£) - Break-even sales revenue (£).

Margin of safety (percentage)

Margin of safety (units percentage) =

$$\frac{\text{Budgeted (or actual) sales units} - \text{Break-even sales units}}{\text{Budgeted (or actual) sales units}} \times 100\%$$

Margin of safety (revenue percentage) =

$$\frac{\text{Budgeted (or actual) sales revenue} - \text{Break-even sales revenue}}{\text{Budgeted (or actual) sales revenue}} \times 100\%$$

The margin of safety can be expressed as sales revenue (£), volume (units) sold and as a percentage. Margin of safety is simply the difference between budget (or actual) sales and break-even sales. This information is useful because it shows exactly how much sales could be lost before the product or service ceases to make profit.

There is no objective figure that can indicate 'how safe we are' when a budget (or actual) figure is compared to a break-even figure, and this is something management would need to determine. The main thing is to be able to calculate the margin of safety figures.

Volume (units) sold to achieve a target profit

$$\text{Target profit (units)} = \frac{\text{Fixed overhead} + \text{Target profit}}{\text{Contribution per unit}}$$

This formula is a manipulation of the break-even formula. Rather than calculating the sales revenue (£) or sales volume (units) to break-even, the formula includes both fixed cost and some target profit that is required to be earned.

Revenue (£) to achieve a target profit

Target profit (units) x Selling price per unit.

Profit Volume (P/V) ratio

The Profit Volume (P/V) ratio is more commonly known as the Contribution to Sales ratio. It measures the relationship between contribution earned and sales income for a product or service. A high P/V ratio would indicate the product achieves a high profit margin. A low P/V ratio would indicate the product achieves a low profit margin. The selling price and variable cost per unit are the most important factors that determine and improve this ratio because fixed costs are constant and do not change.

Cash budgets

Cash is the life blood of an organisation that allows it to purchase resources, remain solvent and continue to trade. A cash budget (cash-flow forecast) is an estimation of the cash inflows and outflows, over a specific period of time and is used to assess if an organisation has sufficient liquidity (money) to operate for the foreseeable future.

Example of a cash budget

Cash budget	January	February	March	Total
Receipts				
Cash sales	2,400	6,700	4,200	13,300
Trade receivables	11,000	14,500	13,200	38,700
Sale of non-current assets	0	3,000	0	3,000
Bank loan	0	10,000	0	10,000
Total receipts	13,400	34,200	17,400	65,000
Payments				
Cash purchases	600	700	700	2,000
Trade payables	7,400	5,200	4,500	17,100
Rent	1,200	1,200	1,200	3,600
Staff wages	1,500	1,500	1,600	4,600
Purchase of non-current assets	0	0	35,000	35,000
Drawings	2,500	2,500	2,500	7,500
Other expenses	500	500	500	1,500
Total payments	13,700	11,600	46,000	71,300
Opening bank balance	3,500	3,200	25,800	
Net cash receipts/(payments)	-300	22,600	-28,600	
Closing bank balance	3,200	25,800	-2,800	

The key differences between cash and profit

Net cash inflows/(outflows) are not normally the same as the profit figure reported in the statement of profit or loss. A statement of profit or loss is prepared on an accruals basis and can include non-cash items that are not recognised in a cash budget. A non-cash item means there is no actual cash receipt or cash payment.

Examples of non-cash items

- Inventory adjustments to calculate cost of sales.
- Irrecoverable debts.
- Allowances for doubtful debts.
- Discounts allowed.
- Discounts received.
- Depreciation charges for non-current assets.
- Gain or loss on disposal of non-current assets.

Actions that can be taken if there is insufficient liquidity

- Capital introduced as additional investment from the owner(s) of the business.
- Finance (debt) from banks and other financial institutions.
- Chase trade receivables and collect money more quickly, offer prompt payment discounts (PPD) to encourage customers to pay quicker.
- Reduce purchases of inventory and delay outstanding supplier payments.
- Disposal (sale) of non-current assets.

How accounting software aids cash-flow planning

- Automated data entry saves time and reduces errors.
- Automatically balances the cash book in real-time.
- Automatically completes the transfer of data from the books of prime entry to the receivables and payables ledgers, to provide more accurate information for credit collection and supplier payments.
- Automatically creates real-time cash reports such as cash inflows, outflows and daily balances.
- Automatic warning signals when cash balances are running low.

Funding methods available for the acquisition of non-current assets

- **Cash purchase** - money paid directly from the bank account.
- **Part-exchange** - an existing asset owned by the business is 'traded in' to fund the purchase cost of a new asset, for example an old car is part-exchanged against the cost of a new car and any balance settled using cash or credit.
- **Bank loans** - a bank loan is obtained from a bank or finance company to fund the purchase cost of a new asset.
- **Hire purchase** - the buyer hires (rents) the asset for an agreed period of time with the option to 'purchase the asset' at the end of the finance agreement for a final one-off purchase payment. At the end of the hire agreement ownership of the asset normally transfers to the buyer.
- **Finance lease** - similar to a hire purchase agreement, the asset is 'hired' (rented) for an agreed period of time, but handed back (not purchased) at the end of the lease agreement. At the end of the lease agreement ownership of the asset does not normally transfer to the buyer.

Working capital

Working capital (also called net current assets) is the liquid funding available for conducting the day-to-day operations of the business. Working capital means current assets less current liabilities, this figure can be found in a statement of financial position. Working capital can be positive (current assets are greater than current liabilities) or negative (current assets are less than current liabilities).

Current assets

Current assets are cash and other assets that are or expected to be converted quickly into cash within a period of one year or less.

Examples of current assets

- Closing inventory held for resale.
- Trade receivables (money owed for the sale of goods on credit to customers).
- Money in a bank account.
- Cash in hand e.g. physical notes and coins held.

Current liabilities

Current liabilities are obligations (money owed) that is expected to be paid within a period of one year or less.

Examples of current liabilities

- Bank overdraft (money owed to the bank).
- Trade payables (money owed to suppliers from the purchase of goods on credit).
- VAT and PAYE owed to HMRC.
- Wages owed to staff.

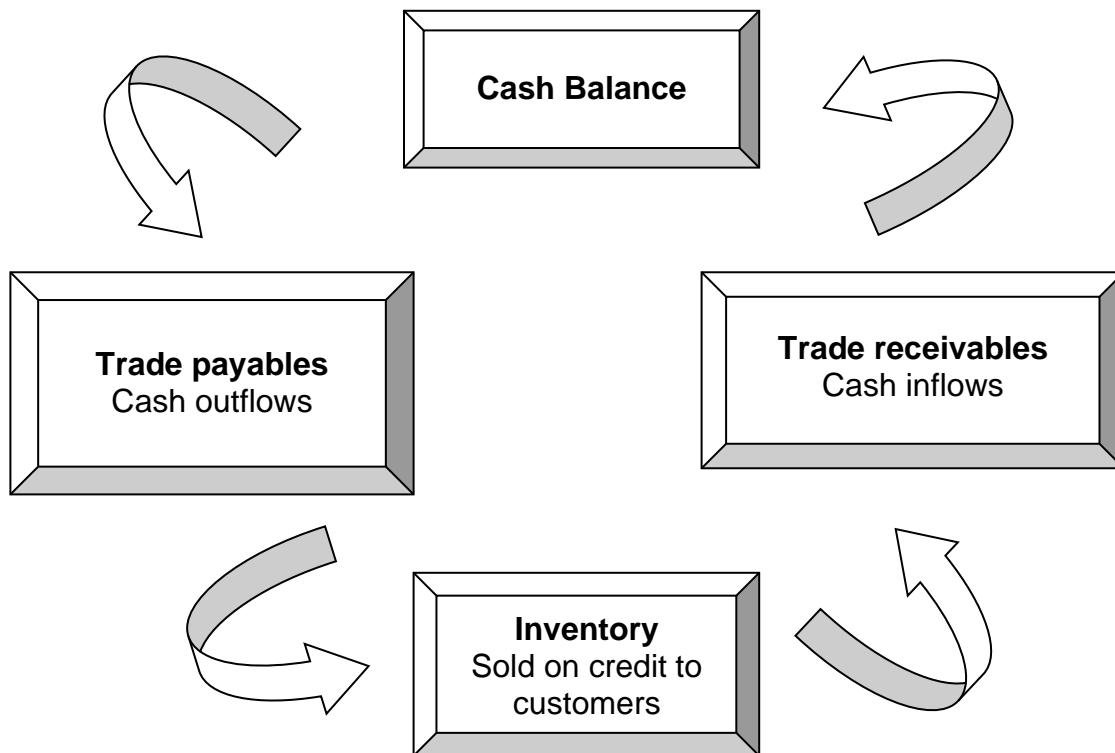
Monitoring working capital

You must be able to calculate the following resource ratios in your exam:

- **Inventory holding period (days)** = $\text{inventories} / \text{cost of sales} \times 365$. A ratio that indicates the average length of time (in days) that inventory is held, before sale to customers.
- **Trade receivables collection period (days)** = $\text{trade receivables} / \text{revenue} \times 365$. A ratio that indicates the average length of time (in days) that customers take to pay their invoices, from the sale of goods on credit.
- **Trade payables payment period (days)** = $\text{trade payables} / \text{cost of sales} \times 365$. A ratio that indicates the average length of time (in days) the business takes to pay its suppliers, for the purchase of goods on credit.
- **Working capital cycle (days)** = $\text{inventory days} + \text{receivable days} - \text{payable days}$. A ratio that indicates the average length of time (in days) between paying for goods ordered from suppliers and then finally receiving the cash from the sale of goods to customers.

The working capital cycle

The working capital cycle (also called the trade cycle or cash cycle) measures the average length of time (in days) between paying for goods ordered from suppliers and the final receipt of cash from the resale of the goods to customers. It is desirable for a business to keep the working capital cycle as short as possible as it helps to ensure a quicker turnaround of cash inflows into the business bank account.



Actions that help shorten the working capital cycle

- Paying suppliers later and negotiating longer terms of payment.
- Reduce inventory holdings for raw materials, work-in-progress and finished goods for resale, by implementing tighter inventory controls and using just in time policies to order goods from suppliers.
- Reduce the terms of payment given to customers to get paid quicker, such as cash rather than credit sales, tighter credit control and offering prompt payment discounts.

Spreadsheet Skills

Practice activities and mock exams tasks using Microsoft Excel can be practiced by visiting our website www.acornlive.com and choosing STUDY FOR AAT (Q2022). The best way to learn spreadsheets is to play around using practice data.

Spreadsheet skills are required to support the following examinable tasks:

- Flexing budgets.
- The calculation and analysis of variances.
- Production of operating statements.
- Overhead absorption and allocation.
- Short-term decision making.
- Cash budgeting.

Enhance the visual presentation of data

- Insert/edit headers and footers.
- Hide/unhide rows/columns.
- Format columns and rows to enhance understanding of data: cell fill, font type, font colour, font size, bold, italics, alignment.
- Freezing rows and columns.
- Adjust margins, orientation and print area.
- Select data from different sources.
- Enter data manually into appropriate cells and worksheets.
- Link data from different sources within the same worksheet/across different worksheets.
- Copying and pasting special values (and paste linking).

Formatting numbers

- Decimals, whole numbers, thousand separator, %.
- Currency, accountancy, general, number.
- Show adverse/negative figures with () or –.

Producing and formatting charts

Charts give a useful and visual way of understanding data.

- Producing charts such as a bar, column, or pie chart.
- Producing pivot tables and pivot charts.
- Making alterations to charts such as resizing and changing the chart type.
- Altering, labelling and formatting the chart title, axis title, axis scale and legend.

Your exam requires you to apply mathematical functions (using absolute or relative cell referencing) and statistical techniques.

Mathematical functions

- Sum
- Average
- Minimum
- Maximum
- Round
- Roundup
- Rounddown
- Count
- Counta
- Countif
- IF (simple and nested)
- Sumif
- VLOOKUP
- HLOOKUP
- DAYS

Statistical techniques:

- Goal seek
- Forecast

Mathematical symbols used in formulas

Addition	+
Subtraction	-
Multiplication	*
Division	/

Logic symbols	
Equal to	=
Less than	<
Less than or equal to	<=
Greater than	>
Greater than or equal to	>=
Not equal to	<>

The order of precedence for excel calculations

Excel will perform calculations in a formula, using a specific order (or sequence) and this is shown below. Brackets can be used in a formula to override this order of precedence.

Calculation	Symbol	Order of Precedence
MULTIPLICATION	*	1
DIVISION	/	2
ADDITION	+	3
SUBTRACTION	-	4

Tools to organise and analyse data

- Sort and filter data (using single and/or multiple criteria).
- Subtotals (for average, sum, maximum and minimum).
- Conditional formatting.
- Remove duplications in data.
- Comments box (show and hide).
- Freezing rows and columns.

Tools to protect the integrity of data

- Protect individual and ranges of cells.
- Use data validation to restrict data entry and editing.

Tools to verify the accuracy of data by using formula auditing tools

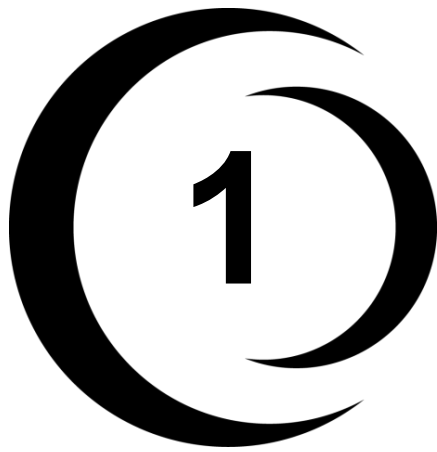
Your exam requires you to apply excel tools to organise, analyse and protect the integrity of data, including formula auditing tools to verify the accuracy of data.

- Trace precedents.
- Trace dependents.
- Show formulas.

Tools to prepare a worksheet for printing

Your exam also requires you to use 'Set Print Area', 'Print' and 'Page Setup' to prepare a worksheet for printing. The following excel tools are examinable.

- Insert/edit headers and footers.
- Adjust margins, orientation and print area.



Mock Exam One - Solutions

**AAT L3 Management
Accounting Techniques**

Task 1 - Solutions (24 marks)

This task is about costing techniques.

This task contains parts (a) and (b).

(a) (i) Complete the following sentence using the drop down list.

(1 mark)

The classification of cost which is useful for forecasting costs, in particular when activity levels rise or fall is by **Behaviour**.

This classification is useful for budgeting (forecasting) costs for different activity levels, such as the amount of goods made or services performed. It classifies (or 'groups') costs as either variable costs or fixed costs, to help identify what costs will remain the same (fixed costs) or change (variable costs), as a result of activity levels changing.

(a) (ii) Complete the following sentence using the drop down list.

(1 mark)

An overtime premium paid to production workers is normally included as direct labour cost rather than indirect labour cost, if overtime worked was due to **a customer's specific request**.

An overtime premium is the 'excess amount' paid above the 'basic rate' for overtime worked by an employee (the overtime rate less basic rate per hour). The general rule is that if overtime is undertaken by a production worker due to general pressures of work, then any overtime premium is treated as 'indirect labour cost'. General pressures of work can include staff shortages, or a sudden increase in customer demand. However, a customer may request an urgent order during a busy period that cannot be fulfilled without working overtime, if overtime is worked because a customer has specifically requested it, the cost of overtime premium is normally treated as 'direct labour cost'.

(a) (iii) Calculate the cost of issuing 150 tonnes of Bean Z grade coffee beans on 20 October. Round your answer to the nearest whole pound (£).

(2 marks)

Cost of materials issued £**136439**.

(a) (iv) Calculate the closing inventory balance after the issue on 20 October. Round your answer to the nearest whole pound (£).

(2 marks)

Closing inventory remaining £**262171**.

Workings:

FIFO is a 'selection' method to determine what raw materials were used during a period of time. FIFO determines an issue cost for raw materials by selecting the 'earliest' or 'oldest' inventory that has been purchased.

- On 20 October, 150 tonnes were issued.
- Opening inventory on 1 October would be selected first, the 80 tonnes have a purchase cost of £72,000.
- 70 tonnes still need to be selected. The earliest purchases next were on 7 October. The price per tonne for purchases on 7 October is £920.55 per tonne. 70 tonnes x £920.55 per tonne = £64,438.50. **Note:** this should be rounded to the nearest pound (£64,439).

The total issue cost using FIFO would be £136,439 (£72,000 + £64,439).

1 October	80	900.00	72,000
7 October	70	920.55	64,439
Total (FIFO)	150		136,439

The balance remaining after the issue of 150 tonnes is closing inventory.

Date of purchase	Number of tonnes	Price per tonne	Total cost (£)
1 October	80	900.00	72,000
7 October	200	920.55	184,110
14 October	150	950.00	142,500
Total on the 14 October	430		398,610
Issue on the 20 October	-150		-136,439
Balance after issue	280		262,171

(a) (v) Identify whether the following statements are TRUE or FALSE.

(4 marks)

	TRUE	FALSE
Economic order quantity is an amount ordered to minimise inventory holding and ordering costs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Buffer (safety) stock is an inventory level at which an order is placed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The reorder level indicates that if levels fall below this amount it signals a crisis or emergency.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The inventory balance under the FIFO method will be higher than the AVCO method during a period of rising prices.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- First statement is TRUE. Economic order quantity calculates an amount of inventory ordered that will minimise total inventory holding and ordering costs.
- Second statement is FALSE. The reorder level (not buffer or safety stock) is a level (or 'amount') set by management. If actual inventory amounts fall below the re-order level, then a fixed order quantity is placed with a supplier for replenishment.
- Third statement is FALSE. Buffer (safety) stock (not reorder level) is the minimum amount of inventory (a 'buffer') that is stored as a precaution (or 'just in case') a supplier delivery takes longer than normal. If actual inventory amounts fall below the buffer level, it would signal a crisis or emergency because raw material inventory would be running dangerously low.
- Fourth statement is TRUE. The inventory balance under the FIFO method will be higher than the AVCO method during a period of rising prices. FIFO selects an issue cost using the earliest inventory and during periods of rising prices this would be the cheapest. If the issue cost is the cheapest then what is left is the most expensive closing inventory balance left at the end of the period.

(b) (i) Using the information above, complete a budgeted operating profit statement below for month 5 using marginal costing. All figures should be calculated to the nearest whole pound £. Do not use minus signs or brackets. If any answer is zero or not required, then enter '0' in the relevant cell. (8 marks)

Marginal costing statement	Month 5 £
Sales (£105 x 16000 units)	1,680,000
Less variable cost of sales	
Opening inventory	0
Production costs (20000 units x £27.75)	555,000
Closing inventory (4000 units x £27.75)	111,000
Total variable cost of sales	444,000
Contribution	1,236,000
Fixed overheads	120,000
Profit or loss for month 5	1,116,000

Note: 1 mark is given for each correct figure.

Production cost and valuation of inventory (marginal costing)

Direct materials (£ per unit)	11.50
Direct labour (£ per unit)	5.25
Other variable production costs (£ per unit)	11.00
Total variable production cost per unit	27.75

Closing inventory valuation is £27.75 x 4000 units (20000 units production less 16000 units sales) = £111,000.

(b) (ii) The return of 6 bags of cement with a total cost of £36, was sent from buildings maintenance back to stores.

(2 marks)

The cement is treated as indirect materials, since it is not required to make the product. All materials would have originally been sent from stores (an asset for inventory held) and is now being returned back to stores from maintenance, so debit stores ledger control (increase the asset held for cement materials) and credit buildings maintenance expenses (reducing expenses since the cement was unused and returned).

	Cost accounting code	£
Debit	6100	36
Credit	6200	36

1 mark given for each correct row completed.

(b) (iii) The issue of 12 tonnes of beef at a total cost of £14,400 to factory 1.

(2 marks)

Beef is a direct material cost because it is specifically used to make the product (pet food). Stores ledger control (an inventory asset) needs to be decreased (credited) for the inventory issued and direct material cost (an expense) in factory 1 needs to be increased (debited).

	Cost accounting code	£
Debit	2100	14400
Credit	6100	14400

1 mark given for each correct row completed.

(b) (iv) The posting of quality control staff salaries as an expense for the week, the total amount was £4,722.

(2 marks)

Quality control salaries are an indirect labour cost because these staff are not production workers involved in making pet food. Indirect labour cost is treated as production overhead. In this case increase quality control expenses (debit expenses) and credit the wages control account (increase liability to pay wages and salaries).

	Cost accounting code	£
Debit	6000	4722
Credit	9000	4722

1 mark given for each correct row completed.

Task 2 - Solutions (24 marks)

This task is about attributing costs.

This task contains parts (a) and (b).

(a) (i) Calculate the budgeted overhead absorption rate for the machining department based on machine hours. Show your answer to TWO decimal places.
(2 marks)

Budgeted overhead absorption rate for the machining department £**10.00**.

The overhead absorption rate is always based on the budgeted overhead and a budgeted activity level at the beginning of each period. $\text{£120,000} \div 12000 \text{ machine hours} = \text{£10.00}$ per machine hour, which is used to recover (absorb) production overhead to the profit or loss account.

(a) (ii) Complete the following table using your answer from (a)(i) above. All figures should be calculated to the nearest whole pound £.
(6 marks)

	Overheads incurred	Overhead absorbed	Difference absorbed	Under/over absorption
Production overhead	£128,000	£123,000	£5,000	Under absorption

1 mark for overheads incurred. 2 marks for overhead absorbed. 1 mark for the difference absorbed. 2 marks for 'under absorption' selected.

Actual overhead (£128,000) is 'debited' to the production overhead control account during the period. The amount absorbed to the profit or loss (a 'credit' to the production overhead control account) for the period would be £10 per machine hour x the actual activity level (12300 machine hours) = £123,000. Not enough overhead has been recovered during the period, so an under absorption of £5,000 (£128,000 - £123,000) needs to be charged as a further expense to the profit and loss account at the end of the period. A production overhead control account has been provided below to demonstrate the accounting entries and double entry logic.

Production overhead control account (under absorption)

	£		£
Actual overhead	128000	Overhead absorbed to P&L	
		(actual activity 12300 x £10 OAR)	123000
		Under absorption to P&L	5000
	128000		128000

(a) (iii) Complete the following sentence. All figures should be calculated to the nearest whole pound £.

(4 marks)

If direct labour hours were used to recover overheads in the machining department, production overhead for the machining department would be **Over absorbed** by £3600.

2 marks for 'over absorbed' selected. 2 marks for £3,600 correctly calculated.

Actual overhead (£128,000) is 'debited' to the production overhead control account during the period. The amount absorbed to the profit or loss (a 'credit' to the production overhead control account) for the period would be £28 per labour hour x the actual activity level (4700 labour hours) = £131,600. Too much overhead has been recovered during the period, so an over absorption of £3,600 (£131,600 - £128,000) means that expenses in the profit and loss account need to be reduced at the end of the period. A production overhead control account has been provided below to demonstrate the accounting entries and double entry logic.

Production overhead control account (over absorption)

	£		£
Actual overhead	128000	Overhead absorbed to P&L	
Over absorption to P&L	3600	(actual activity 4700 Hrs x £28 OAR)	131600
	131600		131600

(b) (i) Complete the table shown below using activity-based costing (ABC). Each cost driver rate must be calculated and overheads apportioned to each product using appropriate cost drivers. All figures should be calculated to the nearest whole pound £.

(12 marks)

	£	Elf £	Reindeer £	Total overheads £
Cost driver per material requisition	500			
Cost driver per Kw	2			
Total materials handling cost £		300000	100000	£400,000
Total energy cost £		200000	100000	£300,000

2 marks for each correct figure calculated.

Workings:

Cost driver per material requisition

	Elf	Reindeer	Total
Number of material requisitions	600	200	800

Materials handling overhead £400,000 ÷ 800 material requisitions = £500 per requisition

Cost driver per Kw

	Elf	Reindeer	Total
Energy consumed (Kw)	100000	50000	150000

Energy overhead £300,000 ÷ 150000 Kw = £2 per Kw

Total materials handling cost £

Elf £500 x 600 requisitions =	300000
Reindeer £500 x 200 requisitions =	100000
	<u>400000</u>
Total energy cost £	
Elf £2 x 100000 Kw =	200000
Reindeer £2 x 50000 Kw =	100000
	<u>300000</u>

Absorption costing uses budgeted units, labour hours or machine hours to charge overhead to products. It's a simple but less accurate method when compared with ABC because overhead is not just driven by units made or hours worked, it can be driven by many other things that can paint a more accurate picture for product costing.

Activity based costing (ABC) is an extension of the same concept as absorption costing and is a more modern costing method for product costing. It looks in more detail about what causes each type of overhead to be incurred using 'cost drivers' that are more likely cause each type of overhead to be consumed.

For example, Kw of energy consumed by each product is more likely to drive energy overhead for each product and material requisitions (departments requesting the issue of materials from stores) is more likely to drive material handling costs such as warehouse costs, that support each product. This paints a more objective picture than using simple methods like machine or labour hours that are unlikely to drive energy consumed or material handling costs.





Task 3 - Solutions (24 marks)

This task is about short term decision making.

This task contains parts (a) and (c).

(a) Choose the correct description for each type of cost shown above.

(4 marks)

Cost	Type of cost
Direct materials	Variable cost 
Direct Labour	Stepped fixed cost 
Depreciation of machines	Fixed cost 
Repairs and maintenance	Semi-variable cost 

(b) Using the information in part (a) above. Complete the budget shown below for the monthly cost of making 13500 units. Enter figures to the nearest whole pound £.

(12 marks)

Monthly Production		
	18000 units £	13500 units £
Direct materials	144,900	108,675
Direct Labour	21,000	14,000
Depreciation of machines	1,000	1,000
Repairs and maintenance	22,310	17,045

3 marks for each correct figure calculated.

Workings:

Direct materials

2.3 kg x £3.50 per kg x 13500 units = £108,675.

Direct Labour

£7,000 for every 8000 units produced (stepped fixed cost).

From 0-8000 units, the stepped fixed cost would be £7,000. From 8001-16000 units, the stepped fixed cost would be £14,000 (2 x £7,000). 13500 units falls within the range of between 8001-16000 units, the cost is therefore £14,000.

Depreciation of machines

£3,000 incurred every quarter. The budget is for one month, so £3,000 per quarter ÷ 3 months = £1,000 per month.

Repairs and maintenance

£15,000 incurred every year. The budget is for one month, so £15,000 fixed cost each year ÷ 12 months = £1,250 per month. Also variable cost is £1.17 per unit x 13500 units = £15,795. Total cost £17,045 (£1,250 + £15,795).

(c) (i) Calculate the break-even volume (units) each month for Economy Jam. Show your answer to the nearest whole unit.

(2 marks)

Break-even volume (units) for Economy Jam (each month) **3659**.

Contribution per unit (£) = Selling price per unit (£0.69) **less** Variable cost per unit (£0.20 + £0.08). Contribution per unit £0.41.

Break-even volume (units) =
$$\frac{\text{Fixed overhead}}{\text{Contribution per unit}}$$

Break-even volume (units) =
$$\frac{\text{£1,500}}{\text{£0.41}}$$

Break-even volume (units) = 3658.536585 (rounded to 3659 units per month).

(c) (ii) Calculate the margin of safety (units) each month for Standard Jam. Show your answer to the nearest whole unit.

(3 marks)

Margin of safety (units) for Standard Jam (each month) **4091**.

Contribution per unit (£) = Selling price per unit (£0.99) **less** Variable cost per unit (£0.80 + £0.08). Contribution per unit £0.11.

Break-even volume (units) =
$$\frac{\text{Fixed overhead}}{\text{Contribution per unit}}$$

Break-even volume (units) =
$$\frac{\text{£1,200}}{\text{£0.11}}$$

Break-even volume (units) = 10909.09091 (rounded to 10909 units per month).

Margin of safety (units)

Margin of safety (units) = Budgeted (or actual) sales volume - Break-even sales volume.

Margin of safety (units) = 15000 units - 10909 units.

Margin of safety (units) = 4091 units.

(c) (iii) Calculate how many units of Premium Jam must be sold each month to achieve a target profit of £3,000. Show your answer to the nearest whole unit.
(3 marks)

Units of Premium Jam sold to achieve a target profit of £3,000 (each month) **8730**.

Contribution per unit (£) = Selling price per unit (£1.99) **less** Variable cost per unit (£1.20 + £0.16). Contribution per unit £0.63.

Volume (units) sold to achieve a target profit

Target profit (units) =
$$\frac{\text{Fixed overhead} + \text{Target profit}}{\text{Contribution per unit}}$$

Target profit (units) =
$$\frac{\pounds 2,500 + \pounds 3,000}{\pounds 0.63}$$

Target profit (units) = 8730.158730 (rounded to 8730 units per month).

Task 4 - Solutions (16 marks)

This task is about the principles of budgeting and cash management.

This task contains parts (a) and (e).

(a) Identify whether the following statements about cash budgets are true or false.
(4 marks)

	TRUE	FALSE
A cash budget allows management to plan for their organisations future liquidity needs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A gain on the disposal of a non-current asset would be included as a cash receipt in a cash budget.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The part-exchange of an existing asset that is 'traded in' to fund the purchase cost of a new asset, would be included as a cash receipt in a cash budget.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Increasing the trade payables payment period for its suppliers, can temporarily improve net cash-flows for a business.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- The first statement is true. A cash budget (cash-flow forecast) is an estimation of the cash inflows and outflows, over a specific period of time and is used to assess if an organisation has sufficient liquidity (money) to operate for the foreseeable future.
- The second statement is false. A gain on disposal is an accounting adjustment which compares the carrying value of a non-current asset to the cash proceeds (or part-exchange value) received from sale. It is a non-cash item and not included in a cash budget. Any cash proceeds from the sale of a non-current asset would be included as a cash receipt in a cash budget.
- The third statement is false. A part-exchange value is a non-cash item and would not be included in a cash budget. Any cash payment for the purchase of a new asset would be included as a cash outflow in a cash budget.
- The fourth statement is true. Increasing the average length of time the business takes to pay its suppliers for the purchase of goods on credit, will delay payments and temporarily improve cash-flow. This is normally a temporary effect since the business will eventually have to pay its suppliers, or risk losing their goodwill.

(b) Complete the table below to reconcile the gross profit to the net cash inflow/(outflow) from operating activities for the year ended 31 Dec 20X5. Use a minus sign to show a deduction, or a net cash-outflow from operating activities for the year. If any answer is zero, then enter '0' in the relevant cell. (7 marks)

	£
Gross profit for the year	180,000
Change in trade receivables during the year	-25,000
Change in trade payables during the year	18,000
Net cash inflow/(outflow) from operating activities for the year	173,000

1 mark for the gross profit figure for the year (given in the information). 2 marks for all other correct figures (including a minus sign if relevant).

Trade receivables increased by £25,000 during the year (£23,000 1 Jan 20X5 - £48,000 31 Dec 20X5). This means that £25,000 less cash was collected when compared to the sales figure for the year. If sales was £240,000, then cash receipts from customers would be £215,000 (£240,000 - £25,000). £25,000 needs to be deducted from gross profit to work out the cash-flow from operating activities.

There was no inventories during the year which means that purchases would have been the same as cost of sales. Trade payables increased by £18,000 during the year (£10,000 1 Jan 20X5 - £28,000 31 Dec 20X5). This means that £18,000 less cash was paid to suppliers when compared to the purchases figure for the year. If purchases was £60,000, then cash payments to suppliers would be £42,000 (£60,000 - £18,000). £18,000 needs to be added to gross profit to work out the cash-flow from operating activities.

The cash inflow from operating activities for the year would be £215,000 (cash receipts) less £42,000 (cash payments) = cash inflow from operating activities for the year £173,000.

The double entry logic:

Trade receivables			
Balance b/d	23,000	Bank (balancing figure)	215,000
Sales	240,000	Balance c/d	48,000
	263,000		263,000
Trade payables			
Bank (balancing figure)	42,000	Balance b/d	10,000
Balance c/d	28,000	Purchases	60,000
	70,000		70,000

(c) Calculate the trade receivables collection period (days) using the information in part (b) above.

(2 marks)

Trade receivables collection period (days) **73**.

Trade receivables collection period (days) = trade receivables / revenue × 365 (days).
Trade receivables £48,000 / revenue £240,000 × 365 (days) = 73 days.

(d) Identify which ONE of the following factors is more likely to explain why the trade receivables collection period for a business has increased during the year.

(1 mark)

An increase in the effectiveness of credit control.	<input type="checkbox"/>
An increase in discounts allowed for customers who pay their invoices early.	<input type="checkbox"/>
A reduction in credit terms offered to customers for the sale of goods on credit.	<input type="checkbox"/>
A decrease in discounts allowed for customers who pay their invoices early.	<input checked="" type="checkbox"/>

The first three statements are more likely to cause the trade receivables collection period to decrease during the year. A decrease in discounts allowed for customers who pay their invoices early is more likely to increase the trade receivables collection period, because the discount is less financially attractive, customers may take longer to pay their invoices.

(e) Identify TWO actions a business can take if it has insufficient liquidity.

(2 marks)

Withdraw capital invested by the owner of the business.	<input type="checkbox"/>
Dispose of non-current assets.	<input checked="" type="checkbox"/>
Increase credit terms offered to customers.	<input type="checkbox"/>
Delay payments to suppliers.	<input checked="" type="checkbox"/>
Repay the business overdraft.	<input type="checkbox"/>

Disposing of non-current assets could raise more cash for the business. Delaying payments to suppliers will keep much needed funds in the bank account. All the other three actions would worsen the liquidity position of the business.

Task 5 - Solutions (16 marks)

Task 5 must be answered using Microsoft Excel.

To review the solutions for this mock exam task please visit our website
www.acornlive.com and choose STUDY FOR AAT (Q2022).

Task 6 - Solutions (16 marks)

Task 6 must be answered using Microsoft Excel.

To review the solutions for this mock exam task please visit our website
www.acornlive.com and choose STUDY FOR AAT (Q2022).