

Manufacturing accounts

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Read first: [Sole traders](#), [Other payables and other receivables](#), [Depreciation and disposal of non-current assets](#)

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What you need to know

By the end of this topic you should be able to:

1. **Tell direct costs from indirect costs.** A direct cost can be traced to each item made (its materials, the wages of the people who make it); an indirect cost is a factory cost that can't be traced to any one item (the factory's rent, the supervisor's wages).
2. **Understand the building blocks of a manufacturing account:** direct materials, direct labour, prime cost and factory overheads.
3. **Understand work in progress** (goods that are partly made at the start or end of the year) and adjust for it.
4. **Calculate the factory cost of production** of the goods finished in the year.
5. **Prepare a manufacturing account, the income statement that follows it, and a statement of financial position** for a manufacturing business.
6. **Make the same year-end adjustments as a sole trader** (topic 5.1): expenses owing and prepaid, income owing and received in advance, depreciation (straight-line, reducing balance and revaluation), irrecoverable debts and a provision for doubtful debts, and goods taken by the owner, splitting shared expenses between the factory and the office.

Understand it

Why a manufacturer needs an extra account

A shop **buys** goods and sells them, so its cost of sales starts with purchases. A **manufacturer** buys **raw materials** and pays people and machines to turn them into **finished goods**. Before it can work out a gross profit, it has to know what it cost to **make** the goods it finished this year. That figure, the **cost of production**, is worked out in the **manufacturing account**, which comes before the income statement.

So a manufacturer's financial statements have three parts:

1. the **manufacturing account**: every factory cost, ending with the cost of production;

2. the **income statement**: the trading section uses the cost of production in place of (or as well as) purchases, then the office and selling expenses come off gross profit;
3. the **statement of financial position**, which now has three kinds of inventory.

Direct and indirect costs

Ask of each cost: **can I see it in each item that comes off the production line?**

- **Direct materials**: what the product is made of (clay for a mug, wood and screws for a chair, fabric and buttons for a shirt), including **carriage inwards** to bring them to the factory, less any returned to the supplier.
- **Direct labour** (direct wages): the pay of the people who make the product with their hands or machines (potters, machine operators, assemblers, sewing machinists, workers who fill or label the product on the production line).
- **Direct expenses**: other costs charged per item made, such as a **royalty** paid to a designer for each item produced, or hire of a special tool for one job.

Add the three and you have the **prime cost**: the total of the direct costs, and nothing else.

Factory overheads (indirect costs) are the factory's other costs. They are needed to make the products but can't be traced to any one of them:

- wages of the factory **supervisor**, manager, cleaners, security guards and maintenance staff (**indirect wages**);
- factory rent, rates, insurance, heating, lighting and power;
- **depreciation** and **repairs** of factory machinery and buildings;
- general factory expenses.

Costs that have nothing to do with the factory stay out of the manufacturing account and go in the **income statement**: office wages and expenses, selling and distribution costs (sales staff, delivery drivers, carriage outwards, delivery vehicles), and bank interest.

Cost	Where it goes
Raw materials used, carriage on raw materials	Manufacturing account: direct materials (prime cost)
Wages of workers who make the product	Manufacturing account: direct labour (prime cost)
Royalties per item made	Manufacturing account: direct expenses (prime cost)
Supervisor's wages, factory rent, power, repairs and depreciation of factory machinery	Manufacturing account: factory overheads
Opening and closing work in progress	Manufacturing account: after the overheads

Cost	Where it goes
Purchases of finished goods (bought in to resell) and carriage on them	Income statement: trading section
Office wages, office rent, sales staff, delivery drivers, carriage outwards, delivery vans	Income statement: expenses (profit section)

Shared expenses

A single bill often covers the factory and the office (rent for one building, one insurance policy). First **adjust** it for amounts owing or prepaid, **then split** it in the ratio the question gives. Tamarind Ceramics paid rent and rates of \$12 800, which included \$800 for next year, and three quarters relates to the factory: the expense is $12\,800 - 800 = 12\,000$, so \$9 000 is a factory overhead and \$3 000 an office expense in the income statement.

Work in progress

At the year end some goods are **partly made**: shaped but not fired, or assembled but not painted. This is **work in progress**. It already has materials, labour and overheads in it, but it isn't finished, so it can't be sold yet.

- **Opening work in progress** was started last year and finished this year, so its cost is **added**.
- **Closing work in progress** has been paid for this year but isn't finished, so its cost is **taken off**, and it is carried forward as a current asset.

The adjustment comes **after** the factory overheads, because work in progress contains overheads as well as prime cost. If closing work in progress is higher than opening, the cost of production falls; if it is lower, the cost of production rises.

Cost of production

$$\text{cost of production} = \text{prime cost} + \text{factory overheads} + \text{opening WIP} - \text{closing WIP}$$

It is the full factory cost of the goods **completed** in the year, and it is transferred to the trading section of the income statement. Divide it by the number of units finished to get the **manufacturing cost of one unit**.

Manufacturing account: direct costs	
direct materials (cost of materials consumed)	47 900
+ direct labour	36 500
+ direct expenses (royalties)	1 600
= Prime cost	86 000

↓

Manufacturing account: overheads and WIP	
+ factory overheads (indirect costs)	50 100
+ opening work in progress	4 300
– closing work in progress	5 200
= Cost of production	135 200

↓ transferred to the income statement

Income statement: trading section	
opening finished goods + cost of production	146 700
+ finished goods bought in (with carriage)	7 100
– closing finished goods	9 700
= Cost of sales	144 100
Revenue 212 000 – cost of sales = Gross profit	67 900

A full example

Tamarind Ceramics makes mugs. It also buys in coasters to sell alongside them. Its figures for the year ended 31 December 2025:

- Raw materials (clay and glaze): inventory 1 January \$6 400, 31 December \$7 200; purchases \$48 300; returns to suppliers \$500; carriage inwards \$900.
- Wages: potters \$36 500; factory supervisor \$18 000, with \$1 200 owing at the year end; office staff \$22 000; delivery driver \$9 500.
- Royalty to the mug designer \$1 600. Factory power \$7 400. Factory maintenance \$3 100.
- Rent and rates \$12 800 (including \$800 prepaid), three quarters factory. Insurance \$4 000, 60% factory.
- Kilns and machinery: cost \$60 000, provision for depreciation \$24 000; depreciation 25% a year, reducing balance.
- Work in progress: 1 January \$4 300, 31 December \$5 200.

Tamarind Ceramics: Manufacturing account for the year ended 31 December 2025

	\$	\$
Cost of materials consumed		
Opening inventory of raw materials		6 400
Purchases of raw materials		48 300
Less Purchases returns		(500)
Carriage inwards		900

	\$	\$
	55 100	
Less Closing inventory of raw materials	7 200	47 900
Direct wages		36 500
Royalties		1 600
Prime cost		86 000
Factory overheads		
Factory supervisor's wages (18 000 + 1 200)	19 200	
Factory power	7 400	
Rent and rates ($12\,000 \times \frac{3}{4}$)	9 000	
Insurance ($4\,000 \times 60\%$)	2 400	
Factory maintenance	3 100	
Depreciation of machinery ($((60\,000 - 24\,000) \times 25\%)$)	9 000	50 100
		136 100
Add Opening work in progress		4 300
		140 400
Less Closing work in progress		5 200
Cost of production		135 200

The office staff and the driver are not here: they are not factory costs.

The income statement

The trading section works like a shop's, with the cost of production joining the cost of sales. Tamarind's revenue was \$212 000; finished mugs and coasters in inventory were \$11 500 at the start and \$9 700 at the end; coasters bought in cost \$6 800 plus \$300 carriage.

Tamarind Ceramics: Income statement for the year ended 31 December 2025

	\$	\$
Revenue		212 000
Less Cost of sales		
Opening inventory of finished goods	11 500	
Cost of production	135 200	
Purchases of finished goods	6 800	

	\$	\$
Carriage inwards on finished goods	300	
	153 800	
Less Closing inventory of finished goods	9 700	144 100
Gross profit		67 900
Less Expenses		
Office salaries	22 000	
Delivery driver's wages	9 500	
Rent and rates ($12\,000 \times \frac{1}{4}$)	3 000	
Insurance ($4\,000 \times 40\%$)	1 600	36 100
Profit for the year		31 800

Only **finished goods** appear in the trading section. Raw materials and work in progress have already been dealt with in the manufacturing account.

The factory finished 6 760 mugs, so each cost $135\,200 \div 6\,760 = 20$, that is \$20, to make.

The statement of financial position

It is laid out like a sole trader's, with three differences: the factory's non-current assets, **three inventories**, and the year-end adjustments from both accounts.

Tamarind Ceramics at 31 December 2025 (extract)	\$	\$
Non-current assets: kilns and machinery, cost 60 000 less depreciation (24 000 + 9 000)		27 000
Current assets		
Inventory: raw materials	7 200	
Inventory: work in progress	5 200	
Inventory: finished goods	9 700	
Other receivables (rent prepaid)	800	22 900
Current liabilities		
Other payables (supervisor's wages owing)		1 200

All three inventories are **current assets**. You may list them separately or give one total of \$22 100.

The other adjustments

Everything from sole traders applies, and the only extra question is "factory or office?":

- **Owing** (accrued): add it to the expense; a current liability. **Prepaid**: take it off; a current asset. If a payment covers a period past the year end, only the months inside the year are this year's expense.
- **Depreciation**: straight-line (a percentage of cost), reducing balance (a percentage of cost less the provision) or revaluation (opening value + bought – closing value). Factory machinery goes in the overheads; office equipment and delivery vans go in the income statement.
- **Irrecoverable debts, provision for doubtful debts, goods taken by the owner**: these are about customers and selling, so they go in the income statement and the statement of financial position, never in the manufacturing account.

Key facts and formulas

There is no formula list in the IGCSE Accounting exam, so everything here must be learnt.

Formula	Status
Cost of materials consumed = opening raw materials + purchases – returns + carriage inwards – closing raw materials	Learn it
Prime cost = direct materials + direct labour + direct expenses	Learn it
Total factory cost = prime cost + factory overheads	Learn it
Cost of production = prime cost + factory overheads + opening WIP – closing WIP	Learn it
Cost of sales = opening finished goods + cost of production + purchases of finished goods (and carriage on them) – closing finished goods	Learn it
Gross profit = revenue – cost of sales	Learn it
Cost of one unit = cost of production ÷ units completed	Learn it
Revenue = cost of sales $\times \frac{100 + \text{mark-up } \%}{100}$	Learn it
Gross margin = $\frac{\text{gross profit}}{\text{revenue}} \times 100$	Learn it
Shared expense: adjust for owing and prepaid first, then split factory : office	Learn it
Reducing balance depreciation = (cost – provision for depreciation) $\times$ rate	Learn it

How to do it

We have 68 tagged questions for this topic from 2021 to 2025 (49 different, as many appear on two paper variants): 54 one-mark multiple-choice questions from Paper 1 and 14 twenty-mark Paper 2 questions. 13 of the 14 Paper 2 questions mix several types, so the counts add up to 90. Other parts of those Paper 2 questions (valuing inventory, a rent and rates account, credit control, a journal entry, accounting principles) are taught in their own topics.

Question type	Questions
Direct or indirect: sort the costs	20
Calculate a cost figure (multiple choice)	17
Prepare the manufacturing account	14
Work in progress: its effect and where it goes	12
Prepare the trading section of the income statement	10
Advise the owner on a production decision	9
Effect of an error or an omitted cost	5
Manufacturing cost of one unit	2
Current assets of a manufacturer	1

1. Direct or indirect: sort the costs (20 questions)

All multiple choice. For each item ask, in this order:

1. **Is it a factory cost at all?** If it is about the office, selling or delivering finished goods, it goes in the income statement, not the manufacturing account.
2. **Can it be traced to each item made?** Then it is **direct** (prime cost). Otherwise it is an **indirect** factory cost (overhead).

Variations you will meet:

- **"Prime cost is ..."**: direct materials + direct labour + direct expenses, that is, **all the direct production costs and only those**. It never includes overheads, and it is more than just materials and labour when there are royalties.
- **Direct**: raw materials and components, carriage inwards on raw materials, wages of the people who make, fill, assemble, sew or label the product, royalties per item.
- **Indirect**: supervisors', cleaners' and maintenance staff's wages; factory rent, rates, insurance, heating, lighting and power; **repairs** and **depreciation** of factory machinery.
- **Neither (income statement)**: carriage outwards, delivery drivers and loaders, delivery vehicles and their depreciation, office staff and office cleaners, sales staff, carriage on purchases of **finished** goods (trading section).

- **"What is shown in a manufacturing account?":** the cost of materials consumed, prime cost, overheads and the cost of production. **Not** purchases of finished goods or cost of sales (both income statement).
- **"Which wages are expenses in the income statement?":** the ones outside the factory: office cleaners, sales staff, drivers delivering to customers.

2. Calculate a cost figure (multiple choice) (17 questions)

Write the ladder down and fill in what you are given; the answer is one rung.

1. **Cost of materials consumed** = opening raw materials + purchases + carriage inwards – returns – closing raw materials.
2. **Prime cost** = materials consumed + direct labour + direct expenses. If the question lists overheads too, leave them out.
3. **Cost of production** = prime cost + overheads + opening WIP – closing WIP.
4. **Cost of sales** = opening finished goods + cost of production + purchases of finished goods – closing finished goods.

For example, prime cost \$94 000, overheads \$21 500, opening WIP \$3 200, closing WIP \$4 100: cost of production = 94 000 + 21 500 + 3 200 – 4 100 = 114 600.

Variations you will meet:

- **"Total direct costs":** add only materials, direct wages and direct expenses; skip the supervisor, heat and light, rent and depreciation.
- **First year of trading:** there is no opening inventory or opening WIP; just take off the closing figures.
- **Working backwards:** if you are given the cost of production and asked for closing WIP, rearrange: closing WIP = prime cost + overheads + opening WIP – cost of production.
- **Total inventory at the year end:** closing raw materials + closing WIP + closing finished goods. You may have to find closing WIP first, as above.
- **Distractors:** closing finished goods, purchases of finished goods or cost of sales items offered in a cost-of-production question. They belong to the trading section, so ignore them.

3. Prepare the manufacturing account (14 questions)

Paper 2, 9–13 marks. The layout earns the marks, so learn it as a fixed order.

1. **Heading:** "[Name] Manufacturing account for the year ended [date]".
2. **Cost of materials consumed:** opening inventory of raw materials, purchases of raw materials (less returns), carriage inwards on raw materials; subtotal; less closing inventory of raw materials. Label the result.
3. **Direct wages** (write "Direct wages" or "Factory operatives' wages", never just "Wages") and any **direct expenses** such as royalties.
4. **Prime cost:** label it.

5. **Factory overheads**, each with its working in brackets: indirect wages (plus any owing), factory share of each shared expense (adjusted first, then split), factory general expenses (plus owing, less prepaid), repairs, depreciation of factory machinery. Total them and **add** to prime cost.
6. **Add opening work in progress, less closing work in progress.**
7. **Cost of production**: label it.

Variations you will meet:

- **Something owing**: "\$1 750 was owed for the supervisor's wages" means the overhead is the amount paid plus \$1 750.
- **Something prepaid across the year end**: insurance of \$3 600 paid for the year to 31 December, with a 30 September year end, has 3 months ($3\,600 \times \frac{3}{12} = 900$) prepaid, so the expense is \$2 700 before any split.
- **Ratios in any form**: 60%, $\frac{2}{3}$, "three quarters", or 5 : 3 (factory = $\frac{5}{8}$ of the total).
- **Depreciation** on reducing balance uses cost less the provision already made; straight-line uses cost.
- **Leave out**: revenue, office wages and expenses, the cost of machinery and the provision for depreciation (only this year's depreciation goes in), finished goods, and the bank balance.

4. Work in progress: its effect and where it goes (12 questions)

Multiple choice. Remember one chain: **opening WIP is added, closing WIP is taken off**, and the cost of production flows into cost of sales, which comes off revenue.

Work in progress over the year	Cost of production	Cost of sales	Gross profit
Increased (closing higher than opening)	decreases	decreases	increases
Decreased (closing lower than opening)	increases	increases	decreases

Variations you will meet:

- **By how much**: only the **difference** changes the cost of production. WIP falling from \$4 500 to \$3 900 raises the cost of production by \$600.
- **The WIP adjustment was forgotten** (neither figure used): the cost of production is out by the difference. If WIP rose during the year, leaving it out overstates the cost of production and so understates gross profit.
- **Where it is in the statement of financial position**: a **current asset**, as part of inventory.
- **True statements**: it is partly made goods only (finished goods are separate); it is adjusted after the overheads, not in prime cost; it appears in the manufacturing account, not the income statement.

5. Prepare the trading section of the income statement (10 questions)

Paper 2, 4–7 marks.

1. **Heading**: "[Name] Income statement (trading section) for the year ended [date]".
2. **Revenue** (less any sales returns).

3. **Cost of sales:** opening inventory of finished goods; **cost of production** from your manufacturing account; purchases of finished goods (less returns) and carriage on them; subtotal; less closing inventory of finished goods.
4. **Gross profit**, labelled.

Variations you will meet:

- **Revenue from a mark-up:** work out cost of sales first, then $\text{revenue} = \text{cost of sales} \times (1 + \text{mark-up})$. With cost of sales \$250 000 and a 40% mark-up, revenue is \$350 000 and gross profit \$100 000. A bank balance in the question is not revenue.
- **"Calculate the gross profit"** without a layout: set out the same lines as a list of workings.
- **Gross margin:** $\text{gross profit} \div \text{revenue} \times 100$, to the decimal places asked, with the % sign.
- **The rest of the income statement:** gross profit less the office and selling expenses (including the office share of shared costs) gives the profit for the year.

6. Advise the owner on a production decision (9 questions)

Paper 2, 5 marks: usually two or three points for, two or three against (4 marks between them) and a **recommendation** (1 mark). Tie each point to the figures in the question, write "cheaper" only when the figures show it, and give the increase in costs as one point rather than listing every factory expense. The owner already has a business and customers, so don't write about finding customers from scratch.

Start making a product that is now bought in

- For: the business controls its own **quality**; it no longer depends on a supplier's **prices**, which may rise; it no longer depends on a supplier **delivering on time**; the supplier's profit is saved, so each item may cost less; spare factory space, machines or workers are put to use; the design can be changed to suit customers, which may lead to higher sales and profit.
- Against: new **machinery** or equipment may be needed, which needs money; the **cost of production** will rise (more materials, workers and factory costs), and making may cost more than buying; workers may lack the **skills**, so quality may be worse and customers unhappy; the factory may not have the **space** (or storage) needed; it may not be able to make **enough** to meet demand; setting up takes time, and there is less time for the main product.

Stop making something and buy it in instead: the same points the other way round. For: the supplier may be cheaper or better, factory space and workers are freed for more profitable products, less machinery to buy and maintain, the supplier's credit terms help cash flow. Against: the business depends on the supplier's price, quality and reliability; its own workers may lose their jobs and machinery stands idle; it loses control of the product; the supplier might also sell to competitors.

Stop buying finished goods and make more instead: For: better control, the whole margin is kept, spare capacity is used. Against: the factory may not be able to make enough, extra workers and materials are needed, output may not all be sold, and customers who liked the bought-in range may go elsewhere.

Turn office space into factory space: For: more output, so more sales and profit if demand is there; costs such as rent are already paid. Against: the extra output **may not sell**; conversion and new machines cost money; the office staff and their work need somewhere to go; factory overheads rise; work is disrupted while it is done.

Buy a closing competitor's finished goods at a discount: For: the goods are cheap, so selling them should be profitable; more goods to sell may bring more revenue and customers; finished goods turn into cash quickly; if the business's own inventory has fallen, there is room to sell more. Against: compare the price with the **cash at bank**: if the money isn't there, it would have to borrow and pay **interest**; storage and selling costs rise; the goods may be unpopular or poor quality and not sell.

Take on a new customer or order (on credit), such as a monthly order for a new kind of product with 60 days to pay: For: more revenue and profit; the factory's spare capacity is put to use; a regular order makes future sales more certain; it opens a new market and may bring further customers. Against: waiting 60 days for payment hurts cash flow, especially when the bank balance is small and the business itself pays sooner; the customer may pay late or never (an irrecoverable debt); the factory may lack the capacity, or the workers the skills, for a new product; new materials or machinery may be needed; existing customers may be neglected if their orders are delayed.

Finish with "**I recommend that [name] should / should not ... because ...**", a reason that follows from your points.

7. Effect of an error or an omitted cost (5 questions)

Multiple choice. Place the item correctly first, then trace it down the ladder.

1. **Where should it have gone?** Prime cost, factory overheads, trading section or profit section.
2. **Which totals include that place?** A prime-cost item is in prime cost, cost of production, cost of sales and both profits. An overhead is in the cost of production onwards, but **not** prime cost. An office expense affects only the profit for the year.
3. **Moved within the same account** (for example carriage on raw materials put in overheads instead of prime cost): the totals it passed through wrongly change; the cost of production does not change.

Variations you will meet:

- **An overhead left out** (such as factory cleaners' wages): indirect wages and cost of production are understated; prime cost is not affected.
- **Factory rent owing added at the year end**: prime cost no effect, cost of production increases, gross profit decreases.
- **A shared cost omitted**: only the factory share changes the cost of production. Lighting of \$2 400 left out, 80% factory, adds \$1 920.

8. Manufacturing cost of one unit (2 questions)

Paper 2, 1 mark. Cost of production $\div$ number of units completed. Round the way the question says ("round up to the nearest dollar" means the next whole dollar). Use the cost of production, not cost of sales or prime cost.

9. Current assets of a manufacturer (1 question)

Paper 2, 4–6 marks.

1. **Inventory:** raw materials, work in progress and finished goods, all at the closing figures (listed separately or totalled).
2. **Trade receivables** (less any provision for doubtful debts).
3. **Other receivables:** expenses prepaid, such as insurance paid ahead.
4. **Cash at bank**, then total.

Leave out amounts owing (they are current liabilities) and opening inventories.

Worked examples

Example 1

A manufacturer provided these figures for the year ended 31 March 2026.

	\$
Prime cost	212 000
Factory overheads	58 400
Cost of production	271 900
Work in progress at 1 April 2025	7 300
Raw materials at 31 March 2026	3 600
Finished goods at 31 March 2026	2 450

What was the total inventory at 31 March 2026? **[1]**

A \$6 050 B \$11 850 C \$13 350 D \$19 150

Closing WIP = $212\,000 + 58\,400 + 7\,300 - 271\,900 = 5\,800$. Total inventory = $3\,600 + 5\,800 + 2\,450 = 11\,850$. **B (1)**

A leaves out work in progress, C uses the opening work in progress, and D adds both.

Example 2

A manufacturer included the wages of its sales office manager, \$4 000, in the factory overheads. What was the effect of this error? [1]

	Cost of production	Gross profit	Profit for the year
A	overstated	understated	no effect
B	overstated	understated	understated
C	no effect	no effect	no effect
D	understated	overstated	no effect

The \$4 000 should be an expense in the income statement. In the overheads it raises the cost of production and cost of sales, so gross profit is \$4 000 too low. The profit for the year still has the \$4 000 taken off once, so it is right. **A (1)**

Example 3

Lumen Lamps makes desk lamps. Its year ends on 30 June 2025.

	\$
Inventory at 1 July 2024: raw materials	9 250
work in progress	12 600
finished lamps	18 400
Revenue	318 500
Purchases of raw materials	96 700
Carriage inwards on raw materials	1 850
Returns of raw materials to suppliers	2 150
Wages: assembly workers	74 300
factory manager	31 000
sales staff	27 500
Heating and lighting	10 400
Insurance	6 600
Factory maintenance	5 480
Factory machinery: cost	150 000
Factory machinery: provision for depreciation	42 000

Additional information:

1. Inventory at 30 June 2025: raw materials \$10 400, work in progress \$11 750, finished lamps \$20 150.
2. Heating and lighting is shared three quarters factory, one quarter office.
3. Insurance includes \$600 paid for July 2025. It is shared two thirds factory, one third office.
4. Factory maintenance of \$320 was owing at 30 June 2025.
5. Factory machinery is depreciated at 20% a year, reducing balance.
6. The factory completed 8 020 lamps in the year.

(a) Prepare the manufacturing account for the year ended 30 June 2025. **[10]**

(b) Prepare the trading section of the income statement for the year ended 30 June 2025. **[4]**

(c) Calculate the manufacturing cost of one lamp. **[1]**

(d) Calculate the total inventory shown in the statement of financial position at 30 June 2025. **[1]**

(a)

Lumen Lamps: Manufacturing account for the year ended 30 June 2025

	\$	\$
Cost of materials consumed		
Opening inventory of raw materials	9 250	
Purchases of raw materials	96 700	
Less Purchases returns	(2 150)	
Carriage inwards	1 850	
	105 650	
Less Closing inventory of raw materials	10 400	95 250 (1)
Direct wages		74 300 (1)
Prime cost		169 550 (1) OF
Factory overheads		
Factory manager's wages	31 000 (1)	
Heating and lighting ($10\,400 \times \frac{3}{4}$)	7 800 (1)	
Insurance ($((6\,600 - 600) \times \frac{2}{3})$)	4 000 (1)	
Factory maintenance ($5\,480 + 320$)	5 800 (1)	
Depreciation of machinery ($((150\,000 - 42\,000) \times 20\%)$)	21 600 (1)	70 200
		239 750
Add Opening work in progress		12 600
		252 350

	\$	\$
Less Closing work in progress		11 750 (1) both
Cost of production		240 600 (1)OF

The sales staff's wages and the office shares of heating and insurance go in the income statement.

(b)

Lumen Lamps: Income statement (trading section) for the year ended 30 June 2025

	\$	\$
Revenue		318 500
Less Cost of sales		
Opening inventory of finished goods	18 400	
Cost of production	240 600 (1)OF	
	259 000	
Less Closing inventory of finished goods	20 150 (1) both inventories	238 850 (1)OF
Gross profit		79 650 (1)OF

(c) $240\,600 \div 8\,020 = 30$, so \$30 per lamp. **(1)OF**

(d) $10\,400 + 11\,750 + 20\,150 = 42\,300$, so \$42 300. **(1)** The prepaid insurance of \$600 is shown separately, as an other receivable.

Example 4

Hearth & Iron makes wood-burning stoves. It makes its own cast-iron doors in one corner of the factory, at a cost of \$58 a door. A supplier has offered to supply identical doors for \$52 each, with 60 days' credit. Stoves are selling well, and the factory is short of space.

Advise Hearth & Iron whether to buy the doors from the supplier instead of making them. Justify your answer.

[5]

For:

- Each door would cost \$6 less, which lowers the cost of every stove and raises the gross profit. **(1)**
- The corner used for doors could make more stoves, which are selling well, so sales and profit could rise. **(1)**
- 60 days' credit means the doors are paid for after they are used, which helps cash flow. **(1)**

Against:

- The business would depend on the supplier to deliver on time; a late delivery would stop stove production. **(1)**
- The supplier may raise its price later or supply poorer doors, and the business would no longer control the quality. **(1)**
- The workers who make doors may lose their jobs, and the door-making equipment would stand idle. **(1)**

Recommendation: Hearth & Iron should buy the doors in, because the saving and the extra space for stoves outweigh the risks, but it should agree a contract that fixes the price and delivery dates and check the first batch's quality. **(1)**

Any four points (at least one on each side) earn 4 marks, and a recommendation that follows from them earns the fifth.

Common mistakes

- **Missing labels.** "Cost of materials consumed", "Prime cost" and "Cost of production" each mark a stage, and examiners mention their absence every year. Label every subtotal.
- **Vague item names.** "Wages" or "Factory supervisors" on its own is not enough: write "Direct wages" or "Factory supervisor's wages".
- **Overheads inside prime cost**, such as the supervisor's wages or factory rent placed above the prime cost line.
- **Office and selling costs in the overheads:** office wages, sales staff, delivery drivers, office share of rent. They belong in the income statement.
- **The machinery itself in the overheads.** The cost of the machinery and its accumulated depreciation are statement of financial position figures; only this year's depreciation is an overhead.
- **Work in progress in the wrong place**, inside the overheads or in prime cost. It comes after prime cost plus overheads.
- **Taking the overheads off prime cost** instead of adding them.
- **Raw materials in the wrong order:** opening inventory, purchases (with returns and carriage), then less closing inventory.
- **In the trading section**, leaving out the cost of production or the purchases of finished goods, forgetting carriage on the finished goods, or putting raw materials and factory costs there again.
- **Splitting before adjusting.** Add amounts owing and remove amounts prepaid from a shared bill first, then take the factory's share.
- **Revenue from the wrong figure:** with a mark-up, revenue comes from the cost of sales, not from the bank balance.
- **Advice without evidence:** "it is cheaper to make" earns nothing unless the figures show it; give the reason and link it to the question.

How to get the marks

- **Headings:** the business's name, the account's name and "for the year ended [date]".
- **One mark per correctly placed, correctly labelled line** is common in the manufacturing account; the stage totals (prime cost, the total after overheads, cost of production) earn **own-figure (OF)** marks, so finish the account even after a slip.
- **Show workings in brackets** beside each adjusted figure: "Rent and rates ($12\,000 \times \frac{3}{4}$)". A working can earn the mark when the arithmetic slips.
- **Both WIP figures** usually share one mark, as do opening and closing inventories in the trading section.
- **Carry your cost of production** into the trading section: it earns an OF mark even if it is wrong.
- **"Calculate"**: show the working and the answer, with units; follow any rounding instruction exactly.
- **"Advise ... Justify your answer"**: points for and against, each linked to the figures, then "I recommend ...". The recommendation mark needs a clear decision, not "it depends".
- **Multiple choice:** write the ladder (materials → prime cost → overheads → WIP → cost of production → cost of sales → gross profit) and put each figure on its rung before choosing.

Quick check

1. A chair maker has these costs. Say whether each is a direct cost, an indirect factory cost, or neither (income statement): (i) timber for the chairs; (ii) wages of the factory security guard; (iii) depreciation of the delivery van; (iv) a royalty of \$3 per chair paid to the designer; (v) factory rent; (vi) the sales manager's salary.
2. Raw materials: opening inventory \$3 850, purchases \$41 200, carriage inwards \$640, returns to suppliers \$1 100, closing inventory \$4 290. Calculate the cost of materials consumed.
3. Prime cost is \$128 400, factory overheads \$39 650, opening work in progress \$6 120 and closing work in progress \$7 470. Calculate the cost of production.
4. Work in progress fell from \$9 800 to \$8 300 during the year. State the effect on the cost of production and on gross profit, with amounts.
5. Using your answer to question 3: opening finished goods were \$14 300, finished goods bought in \$5 900 and closing finished goods \$12 600. Calculate the cost of sales. The factory completed 13 000 units: calculate the cost of making one unit, to the nearest cent.

Answers

1. (i) Direct. (ii) Indirect. (iii) Neither. (iv) Direct (a direct expense). (v) Indirect. (vi) Neither.
2. $3\,850 + 41\,200 + 640 - 1\,100 - 4\,290 = \textbf{\$40\,300}$.
3. $128\,400 + 39\,650 + 6\,120 - 7\,470 = \textbf{\$166\,700}$.
4. Opening WIP is higher than closing by \$1 500, so the cost of production **increases by \$1 500**, cost of sales rises by the same, and gross profit **decreases by \$1 500**.
5. Cost of sales = $14\,300 + 166\,700 + 5\,900 - 12\,600 = \textbf{\$174\,300}$. Cost per unit = $166\,700 \div 13\,000 = 12.823 \dots = \textbf{\$12.82}$.

Past questions to try

- **0452/23/M/J/24 Q2**: a manufacturing account and trading section, the cost of one unit, and advice on buying a competitor's inventory.
- **0452/23/O/N/23 Q2**: a manufacturing account with returns, a prepayment across the year end and an amount owing, gross profit, and advice on making instead of buying in.
- **0452/21/M/J/23 Q4**: a manufacturing account, a trading section from a mark-up, and advice on converting office space.
- **0452/12/O/N/22 Q26**: the effect of putting carriage on raw materials in the wrong section.