

Accounting Units 1 & 2

Chapter 16 Managing non-current assets

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Chapter 16 Managing non-current assets — 16A Non-current assets: valuation, management and ethics

Theory

Every business controls **resources** it uses to earn revenue. Accounting sorts those resources — its **assets** — by how long the business expects to keep and use them. A **current asset** is expected to be used up or turned into cash **within the next 12 months** (Bank, Accounts Receivable, Inventory). A **non-current asset** is a resource the business expects to keep and use for **longer than 12 months**.

A **non-current asset** is a resource controlled by the business (as a result of a past event) from which future economic benefits are expected, that is:

- **held for use in the operations of the business, not for resale** to customers, and
- **expected to be used for more than one reporting period** (more than 12 months).

Typical examples are **premises, motor vehicles, equipment, machinery, furniture and fittings, and computers**. The defining test is *purpose and life*, not the kind of item. A delivery van a courier drives every day is a non-current asset; an **identical** van sitting on a car dealer's showroom floor is **inventory** — a current asset — because the dealer holds it **for resale**. The same physical object is classified by **what the business does with it**.

Why non-current assets are managed separately. Non-current assets usually represent a large slice of the money a business has invested, they are used across **many** reporting periods, and their benefit is consumed **gradually** rather than all at once. This raises three questions the rest of this chapter answers: at **what amount** is the asset first recorded (its cost — this section); how is the cost of using it **spread** across its life (depreciation — 16B and 16C); and how is all of this **reported and managed** (16C to 16E). Getting the **starting cost** right matters, because every later calculation — depreciation, carrying amount, and any profit or loss on disposal — is built on it.

Valuation: the historical cost basis. A non-current asset is recorded at its **historical cost** — the actual amount the business **sacrificed to acquire the asset and get it into the condition and location necessary for it to be used**. Historical cost is used (rather than an estimate of what the asset is “worth” today) because it can be **verified** against **source documents** — invoices, EFT records and statements — making the figure **faithful, free from bias and capable of independent check**. The **historical cost** basis therefore supports the qualitative characteristics of **faithful representation and verifiability**.

The **cost of a non-current asset** includes **two kinds of outlay**:

- the **purchase price** of the asset itself (its list or agreed price, excluding GST); plus
- **all other costs necessary to bring the asset into a condition and location ready for use** — for example **delivery / cartage inwards, installation and wiring, assembly, modification** to suit the business, **testing and commissioning, stamp duty** on a vehicle transfer, and **legal costs** on premises.

These “get-it-ready” outlays are added to (**capitalised** into) the asset's cost because the business would **not** have the asset **ready to use** without them — they are part of the sacrifice made to obtain the future economic benefit. The rule of thumb: **if the cost was necessary to acquire the asset or to get it working for the first time, it is part of the asset's cost**.

Capital expenditure versus revenue expenditure. The distinction that drives valuation is:

	Capital expenditure	Revenue expenditure
What it is	Spending that acquires a non-current asset, or improves one so it does more or lasts longer than before	Spending on the day-to-day running of the asset in the current period
Benefit	Provides benefit over more than one period	Provides benefit in the current period only
How it is recorded	Added to the cost of the asset (capitalised) — appears in the Balance Sheet	Recorded as an expense — appears in the Income Statement

	Capital expenditure	Revenue expenditure
Examples	Purchase price, delivery, installation, modification, a major upgrade that extends useful life	Registration, insurance, fuel, routine servicing, minor repairs, staff training

Two consequences flow from this. First, **GST is never part of the cost** of a non-current asset. When a business is registered for GST, the 10% GST it pays on the purchase is **claimed back** from the Australian Taxation Office through the **GST Clearing** account, so it is not a cost the business ultimately bears — the asset is recorded at its **GST-exclusive** amount. (Where a supplier's document shows a **GST-inclusive** total, the GST is exactly **1/11** of that total, and the cost is the remaining 10/11.) Second, **ongoing running costs are expenses, not part of the asset**: annual **registration, insurance, fuel**, routine **maintenance** and **staff training** keep the asset operating but do not form part of the price paid to obtain it, so they are reported as expenses of the period in which they are incurred.

Pre-use repairs are different from later repairs. When a business buys a **second-hand** asset that is **not yet usable**, the cost of repairs needed **before it can be used for the first time** (for example, replacing worn parts to make a used truck roadworthy) is **capitalised** — it is part of getting the asset ready for use. A repair to the **same** truck **after** it has entered service is **revenue expenditure** — an expense — because it merely keeps an already-usable asset running. The **timing and purpose** of the repair, not the repair itself, decide the treatment.

Getting rid of the old asset is not a cost of the new one. When a new asset **replaces** an existing one, the cost of **removing and disposing of the old asset** is **not** added to the new asset's cost. It buys nothing for the new asset — it is a cost of getting rid of the **old** one — so it is **revenue expenditure**, an expense of the period. Genuine **site preparation**, on the other hand, **is** capitalised: levelling a floor, pouring a slab or running new wiring so the new asset can be installed is part of getting **that asset** into the condition and location necessary for use. Ask which asset the outlay serves: spending on the **incoming** asset is capitalised; spending on the **outgoing** one is not.

A worked model. *Riverside Couriers* buys a delivery van. The supplier's and other documents show: purchase price \$38 000 (plus GST); government **stamp duty** on the transfer \$760 (no GST); **delivery** of the van to the depot \$400 (plus GST); internal **racking and shelving** fitted so the van can carry the business's parcels \$1 640 (plus GST); the first year's **registration** \$900; the first year's **insurance** \$1 300; and a tank of **fuel** \$120 (plus GST). The **cost of the van** is built up as a **costing schedule**:

Cost component	\$
Purchase price	38 000
Stamp duty (transfer)	760
Delivery to depot	400
Racking and shelving fitted	1 640
Cost of van	40 800

The van is recorded as a non-current asset at **\$40 800**. The **registration \$900, insurance \$1 300 and fuel \$120** are **ongoing running costs** — they are **expensed** in the period, not added to the van, because they keep the van operating rather than getting it ready for use. The **GST** paid on the purchase, delivery, racking and fuel is recorded in **GST Clearing** (it is reclaimable), not in the asset.

Managing non-current assets. Because these assets are valuable, long-lived and spread across the business, a firm needs deliberate strategies to protect the benefit locked up in them:

- **An asset register.** A business keeps a **register** — one record per non-current asset — so it always knows **what it owns, where it is and what it is worth**. A register typically records the **asset's description and identifying number**, the **date acquired**, the **cost** and its components, the **location** and who is responsible for it, and (once depreciation is studied in 16B) the **depreciation method, rate and accumulated depreciation** and the **carrying amount**. A register lets the business reconcile the assets **physically on hand** against the accounting records, supports accurate **depreciation**, flags assets due for **service or replacement**, and provides the detail needed for **insurance** and for reporting.

Asset	ID no.	Date acquired	Cost \$	Location
Delivery van	MV-04	1 Jul 2025	40 800	Depot

Asset	ID no.	Date acquired	Cost \$	Location
Roasting machine	EQ-11	1 Jul 2025	13 600	Kitchen

- **Scheduled (preventive) maintenance.** Servicing machinery and vehicles **on a planned schedule** — rather than only when they break down — keeps them working reliably, **extends their useful life**, reduces costly **breakdowns** and lost trading time, and helps protect staff **safety**.
- **Security and safeguarding.** Physical controls — **secure storage, locks and alarms**, asset **labelling**, restricting **access**, and periodic **stocktakes** of assets against the register — reduce the risk of **theft, loss or misuse**. Adequate **insurance** transfers the risk of fire, theft or accident. Sound **authorisation** over buying and disposing of assets stops assets being acquired or sold without approval.

Each strategy has a **cost** — staff time, service fees, insurance premiums, security equipment — so a business weighs the cost of each control against the **benefit** of protecting an asset it depends on.

Ethical considerations. How a business **values, records and chooses** its non-current assets raises clear ethical questions, and an owner acts ethically only when the accounting is **honest** and the decisions consider more than the business's own profit.

- **Honest valuation.** The cost of an asset must include **only** the outlays that genuinely belong to it. It is unethical (and a breach of **faithful representation**) to **capitalise revenue expenditure** — for example, to bury ordinary **repairs, insurance** or **staff training** inside an asset's cost so that they escape the Income Statement. Doing so **overstates profit** in the current period (because a real expense is left out) and **overstates assets** in the Balance Sheet (because the asset is inflated), and it distorts every future period's **depreciation**. Equally, an owner must not **overstate** an asset's cost, or carry an asset at more than its historical cost, to make the business look stronger than it is — for instance, to impress a lender or a prospective buyer.
- **Full and faithful disclosure.** Users of the reports are entitled to a **complete and unbiased** picture of the business's non-current assets: what they cost, how they are valued, and (from 16B) how they are being depreciated. Concealing that a key asset is old, unreliable or near the end of its useful life, or presenting the assets in a misleading way, denies users **relevant** information and breaches the trust the reports depend on.
- **Social and environmental considerations in asset choices.** Ethical decision-making looks **beyond the dollar cost** of an asset to its **social and environmental** impact. A business choosing a vehicle, machine or fit-out can consider the asset's **energy efficiency** and **emissions**, whether it was **ethically sourced** and safely made, its **noise, waste or pollution**, the **safety** of the staff who will operate it, and how it will be **disposed of** at the end of its life. A cheaper asset that pollutes more, is unsafe, or is made under poor labour conditions may carry a real **social cost** the price tag does not show. Weighing these considerations alongside cost — and being willing sometimes to pay more for the responsible choice — is part of managing non-current assets ethically.

Ethical asset management, in short, means recording assets **honestly**, disclosing them **fully**, and choosing them with an eye to their **wider impact** — not simply doing whatever makes this period's profit or this year's Balance Sheet look best.

Worked examples (scaffolded)

Example 1 — determining the cost of a machine (capitalise versus expense)

Northwind Roastery buys a coffee-roasting machine. The documents show: purchase price \$12 000 (plus GST); **freight** to deliver the machine \$500 (plus GST); **installation and wiring** by an electrician \$800 (plus GST); a **test run and calibration** before first use \$300 (plus GST); **operator training** for staff \$450 (plus GST); and a first-year **service contract** \$600. Determine the cost of the machine.

Working	Comment
Purchase price \$12 000 — capitalise.	The base price of the asset itself (GST-exclusive).
Freight \$500 and installation \$800 — capitalise.	Costs necessary to bring the machine to the premises and get it working — part of getting it ready for use.

Working	Comment
Test run / calibration \$300 — capitalise.	Testing the asset before its first use is part of readying it for use.
Operator training \$450 — expense (do not capitalise).	Training staff is a running cost that benefits the period's operations, not part of the price paid to obtain the machine.
Service contract \$600 — expense.	An ongoing maintenance cost of using the machine, not a cost of acquiring it.
Cost of machine = \$12 000 + \$500 + \$800 + \$300 = \$13 600 .	Only the four capitalised components form the asset's cost.

The costing schedule:

Cost component	\$
Purchase price	12 000
Freight	500
Installation and wiring	800
Test run and calibration	300
Cost of machine	13 600

The **training \$450** and **service contract \$600** are reported as **expenses**; the **GST** is recorded in GST Clearing.

Example 2 — extracting GST from GST-inclusive amounts

Baytown Print buys a printing press. Its records show: purchase price \$22 000 (plus GST); a **delivery** invoice of **\$660 (GST-inclusive)**; an **installation** invoice of **\$1 100 (GST-inclusive)**; and **site preparation** (levelling and reinforcing the floor where the press will stand) \$400 (plus GST). Determine the cost of the press.

Working	Comment
Delivery \$660 GST-inclusive → $\text{GST} = \$660 \div 11 = \60 ; net = \$600 .	GST is exactly 1/11 of a GST-inclusive amount; the cost is the remaining 10/11.
Installation \$1 100 GST-inclusive → $\text{GST} = \$1\,100 \div 11 = \100 ; net = \$1 000 .	Same extraction — the asset is recorded at the GST-exclusive amount.
Capitalise: purchase \$22 000 + delivery \$600 + installation \$1 000 + site prep \$400.	All four are necessary to acquire the press and ready it for use — preparing the floor is part of getting the new press into a usable condition and location.
Cost of press = \$24 000 .	Recorded GST-exclusive; the GST of \$60 + \$100 (plus the GST on the price and site prep) goes to GST Clearing.

Cost component	\$
Purchase price	22 000
Delivery (ex-GST)	600
Installation (ex-GST)	1 000
Site preparation	400
Cost of press	24 000

Worked examples (unscaffolded)

Example 3 — a second-hand asset with pre-use repairs

Hillcrest Landscaping buys a **second-hand** excavator that needs work before it can be used. The documents show: purchase price \$26 000 (plus GST); **transport** on a float to the yard \$1 200 (plus GST); **repairs** to replace worn hydraulic hoses so the machine is operational **before its first use** \$1 800 (plus GST); a new **bucket attachment** fitted \$2 000 (plus GST); first-year **registration** \$640; and a routine **maintenance service** due in three months \$700. Determine the cost of the excavator.

The purchase price, transport, pre-use repairs and the bucket attachment are all necessary to **acquire the excavator and get it into a usable condition**, so all four are **capitalised**. The pre-use repair is part of readying the asset — it is capital, not revenue, because the machine could not be used until it was done. Registration is an **ongoing running cost**, and the maintenance service due in three months is a **future repair of an asset already in use** — both are **expenses**, not part of the cost.

Cost component	\$
Purchase price	26 000
Transport to yard	1 200
Pre-use repairs (hydraulic hoses)	1 800
Bucket attachment fitted	2 000
Cost of excavator	31 000

∴ the excavator is recorded as a non-current asset at **\$31 000**; the registration \$640 and the future maintenance service \$700 are reported as **expenses**.

Example 4 — separating the cost of an asset from its running costs

Coastline Grocers installs a walk-in cold room. The documents show: purchase price \$18 000 (plus GST); **delivery** \$700 (plus GST); a **concrete slab and site preparation** so the unit can be installed \$2 300 (plus GST); **electrical connection** \$1 000 (plus GST); an estimate of the **first year's electricity** to run the unit \$1 500; and an **extended warranty** \$900. Determine the cost of the cold room.

The purchase price, delivery, site preparation and electrical connection are all necessary to **acquire the cold room and get it ready to operate**, so all four are **capitalised**. The first year's **electricity** is an **ongoing running cost**, and the **extended warranty** is a service covering future repairs — both benefit the periods in which the unit is used, so both are **expenses**.

Cost component	\$
Purchase price	18 000
Delivery	700
Concrete slab and site preparation	2 300
Electrical connection	1 000
Cost of cold room	22 000

∴ the cold room is recorded at **\$22 000**; the electricity \$1 500 and the extended warranty \$900 are reported as **expenses** of the periods they relate to.

Practice questions — scaffolded

Question 1

Parkside Florist buys a delivery van. The documents show: purchase price \$24 000 (plus GST); dealer **delivery** \$300 (plus GST); **shelving** fitted so the van can carry arrangements \$1 100 (plus GST); and the first year's **registration** \$700.

- Classify each of the four costs as **capital expenditure** or **revenue expenditure**.
- Calculate the cost of the van.
- Explain why the registration is not included in the cost of the van.

Question 2

Vale Joinery buys a woodworking machine. All amounts on the documents are **GST-inclusive**: purchase price \$16 500; **delivery** \$330; **installation** \$770.

- Calculate the GST included in the purchase price.
- Calculate the cost of the machine (GST-exclusive).
- Explain why GST is not part of the cost of the machine.

Question 3

Riverbend Café buys a **second-hand** oven. The documents show: purchase price \$4 000 (plus GST); **transport** \$250 (plus GST); a **repair** to replace a heating element so the oven works **before its first use** \$550 (plus GST); **cleaning products** for ongoing use \$80 (plus GST); and a first **service** due in six months \$200.

- Classify each cost as **capital** or **revenue** expenditure.
- Calculate the cost of the oven.
- Explain why the pre-use repair is treated differently from the service due in six months.

Question 4

Delta Signs has grown quickly and the owner is unsure exactly what equipment the business owns or where it is kept.

- State three items of information the business would record in an **asset register**.
- Explain one benefit to the business of maintaining an asset register.
- Explain one **maintenance** or **security** strategy the business could use to manage its equipment, and state one benefit of that strategy.

Question 5

Summit Motors paid \$3 000 to repair the engine of a delivery vehicle it had been using for two years. The bookkeeper, on the owner's instruction, **added the \$3 000 to the cost of the vehicle** (capitalised it) instead of recording it as a repair expense, so that this year's profit would look higher.

- State the correct classification of the \$3 000 repair (capital or revenue expenditure).
- Explain the effect of wrongly capitalising the \$3 000 on the reported **profit** and on the reported **assets**.
- Identify the qualitative characteristic that has been breached, and state why the owner's action is unethical.

Question 6

Brightpath Gym buys a treadmill for its floor. The documents show: purchase price \$5 400 (plus GST); **delivery and assembly** \$600 (plus GST); **calibration and safety testing** before use \$400 (plus GST); and an **annual service plan** \$300.

- Calculate the cost of the treadmill.
- State two details the business would record in its asset register for the treadmill.
- Explain one security strategy the gym could use to protect its equipment.

Practice questions — unscaffolded

Question 7

Foxglove Nursery buys a utility (ute). The documents show: purchase price \$29 000 (plus GST); **delivery** \$500 (plus GST); a **tray and canopy** fitted \$3 000 (plus GST); government **stamp duty** \$580 (no GST); first-year **registration** \$800; and first-year **insurance** \$1 100. Calculate the cost of the ute, and state which amounts are excluded from the cost and why.

Question 8

Kingsley Tiles buys a forklift. All amounts are **GST-inclusive**: purchase price \$33 000; **delivery** \$1 320; an **operator safety cage** fitted before use \$880. Calculate the cost of the forklift (GST-exclusive) and the total GST to be recorded in GST Clearing.

Question 9

Harlow Brewing buys a bottling machine. The documents show: purchase price \$45 000 (plus GST); **freight** \$1 200 (plus GST); **installation** \$2 400 (plus GST); a **commissioning test batch** before first use \$900 (plus GST); **staff training** \$1 500 (plus GST); an **annual maintenance contract** \$2 000; and **consumables** (bottles and caps) \$3 500 (plus GST). Calculate the cost of the machine, and state which costs are treated as expenses.

Question 10

Ironbark Timber buys a **second-hand** truck. The documents show: purchase price \$21 000 (plus GST); **transport** to the yard \$900 (plus GST); replacement of **tyres and brakes** to make the truck roadworthy **before use** \$2 100 (plus GST); a **repaint** in the business's colours before use \$1 000 (plus GST); first-year **registration** \$700; and a repair to the tailgate **three months after** the truck entered service \$800. Calculate the cost of the truck, and explain why the two repairs are treated differently.

Question 11

Westgate Office Supplies buys new shop shelving. The documents show: purchase price of the shelving \$8 000 (plus GST); **delivery** \$400 (plus GST); **assembly and installation** \$1 200 (plus GST); and the cost of **removing and disposing of the old shelving** \$600 (plus GST). Calculate the cost of the new shelving, and explain how you treated the disposal cost.

Question 12

Aldgate Bakery has expanded from one shop to four, and the owner has lost track of which ovens, mixers and display units are at which shop, when they were bought and when they were last serviced. Discuss how an **asset register** and a program of **scheduled maintenance** would help the business manage its non-current assets, referring to at least two specific benefits of each.

Question 13

The owner of *Norwood Traders* is applying for a bank loan and wants this year's profit to look as high as possible. The owner instructs the bookkeeper to include \$5 000 of ordinary **repairs** and \$2 000 of **staff training** in the cost of a newly purchased machine, rather than recording them as expenses. Discuss the ethical issues raised, the effect on the business's reports (profit, assets and future depreciation), the qualitative characteristic breached, and the stakeholders who could be harmed.

Question 14

Greenfield Grocers is choosing a new delivery van and has narrowed the choice to two: a diesel van costing \$40 000 that has higher fuel use and emissions, and a low-emission electric van costing \$52 000 that is cheaper to run and quieter. Discuss the **social and environmental** considerations the owner should weigh alongside the \$12 000 difference in cost, and explain why an ethical decision may not simply be the cheapest one.

Question 15

Distinguish between **capital expenditure** and **revenue expenditure**, giving one example of each in the context of a non-current asset, and explain why the distinction matters for the accuracy of a business's Income Statement and Balance Sheet.

Question 16

Fernlea Hardware owns a forklift, a delivery van and a range of power tools, and has suffered a break-in and an unplanned forklift breakdown in the past year. Explain how a program of **scheduled maintenance** and a set of **security** controls could reduce the business's losses and protect the benefit locked up in its non-current assets. Refer to at least two maintenance and two security measures.

Question 17

The asset register of *Marlow Engineering* shows a lathe recorded at a cost of \$20 000. During the year the business spent, on the lathe: (i) \$3 000 (plus GST) to fit a **more powerful motor** that increases the lathe's capacity and extends its useful life; (ii) \$450 (plus GST) on **routine oiling and blade replacement**; and (iii) \$700 (plus GST) to **repair** the lathe after a breakdown. Calculate the updated cost of the lathe to be shown in the asset register, and state the total amount treated as **revenue expenditure**, justifying your treatment of each item.

Question 18

The owner of *Belmont Retail* is preparing to sell the business. To make the Balance Sheet look stronger, the owner wants the business's premises and equipment shown at **current market values well above their historical cost**, and does not want to disclose that much of the equipment is old and near the end of its useful life. Discuss the ethical problems with the owner's plan, referring to the **historical cost** basis of valuation, the need for honest **disclosure**, the qualitative characteristics involved, and the stakeholders who rely on the reports.

Answers

1.
 - a. Capital: purchase, delivery, shelving; revenue: registration. b. **\$25 400** c. See solutions.
2.
 - a. **\$1 500** b. **\$16 000** c. See solutions.
3.
 - a. Capital: purchase, transport, pre-use repair; revenue: cleaning products, six-month service.
 - b. **\$4 800** c. See solutions.
4. a–c. See solutions (register contents; benefit; a maintenance/security strategy).
5.
 - a. **Revenue** expenditure (a repair expense). b. Profit overstated by \$3 000; assets overstated by \$3 000.
 - c. Faithful representation — see solutions.
6.
 - a. **\$6 400** b–c. See solutions.
7. Cost **\$33 080**; registration \$800 and insurance \$1 100 excluded (ongoing running costs).
8. Cost **\$32 000**; GST in GST Clearing **\$3 200**.
9. Cost **\$49 500**; training \$1 500, maintenance contract \$2 000 and consumables \$3 500 are expenses.
10. Cost **\$25 000**; the pre-use repairs are capitalised, the later repair is an expense — see solutions.
11. Cost **\$9 600**; disposal of old shelving \$600 is an **expense** — see solutions.
12. Discuss — see solutions.
13. Discuss — see solutions.
14. Discuss — see solutions.
15. Distinguish — see solutions.
16. Explain — see solutions.
17. Updated cost **\$23 000**; revenue expenditure **\$1 150** — see solutions.
18. Discuss — see solutions.

Fully-worked solutions

Question 1

- a. **Capital expenditure:** the purchase price (\$24 000), the delivery (\$300) and the shelving fitted (\$1 100) — each is necessary to acquire the van and get it ready for use. **Revenue expenditure:** the registration (\$700) — an ongoing running cost.

Cost component	\$
Purchase price	24 000
Delivery	300
Shelving fitted	1 100
Cost of van	25 400

Cost of van = \$24 000 + \$300 + \$1 100 = **\$25 400**.

- c. Registration is an **ongoing running cost** that keeps the van legally on the road each year; it is not part of the price paid to **acquire** the van or get it ready for use, and it benefits only the current period. It is therefore **revenue expenditure** (an expense), not part of the van's cost.

Question 2

- a. GST included in the purchase price = $\$16\,500 \div 11 = \mathbf{\$1\,500}$ (GST is 1/11 of a GST-inclusive amount). The GST-exclusive purchase price is $\$16\,500 - \$1\,500 = \$15\,000$.
- b. Extract the GST from each amount: delivery $\$330 \div 11 = \30 (net \$300); installation $\$770 \div 11 = \70 (net \$700).

Cost component	\$
Purchase price (ex-GST)	15 000
Delivery (ex-GST)	300
Installation (ex-GST)	700
Cost of machine	16 000

Cost of machine = \$15 000 + \$300 + \$700 = **\$16 000**.

- c. The business is registered for GST, so the GST it pays is **claimed back** from the ATO through the **GST Clearing** account — it is not a cost the business ultimately bears. The asset is therefore recorded at its **GST-exclusive** amount.

Question 3

- a. **Capital expenditure:** purchase price (\$4 000), transport (\$250) and the pre-use repair (\$550) — all needed to acquire the oven and make it usable for the first time. **Revenue expenditure:** cleaning products (\$80) and the six-month service (\$200) — ongoing running costs of an asset already in use.

Cost component	\$
Purchase price	4 000
Transport	250
Pre-use repair (heating element)	550
Cost of oven	4 800

Cost of oven = \$4 000 + \$250 + \$550 = **\$4 800**.

- c. The **pre-use repair** was necessary to get the oven into a **usable condition before its first use**, so it is part of the cost of acquiring the asset — **capital expenditure**. The **six-month service** is a routine repair of an oven that is **already in use**; it keeps an existing asset running and benefits only that later period, so it is **revenue expenditure** (an expense). The difference is the **timing and purpose** of the repair, not the repair itself.

Question 4

- a. Any three of: the asset's **description and identifying number**; the **date acquired**; the **cost** (and its components); the **supplier** and source document; the **location** and person responsible; and (once studied) the **depreciation method, rate, accumulated depreciation and carrying amount**.
- b. Any one of: it lets the business know **exactly what it owns and where**, so assets can be checked physically against the records to detect **theft or loss**; it supports **accurate depreciation** and reporting; it flags assets due for **service or replacement**; and it provides the detail needed to **insure** the assets adequately.
- c. For example — **Scheduled maintenance:** servicing equipment on a planned schedule keeps it working reliably, **extends its useful life** and reduces costly breakdowns and lost trading time. **Or — Security:** storing tools securely, labelling assets and restricting access reduces the risk of **theft or misuse**, protecting the benefit the business has invested in the assets.

Question 5

- a. The \$3 000 is a **repair to an asset already in use** — it keeps an existing vehicle running and benefits only the current period, so it is **revenue expenditure** (a repair expense).
- b. By wrongly **capitalising** the repair (adding it to the vehicle instead of expensing it): the current period's **expenses are understated by \$3 000**, so **net profit is overstated by \$3 000**; and the vehicle (a non-current asset) is **overstated by \$3 000**, so **total assets are overstated by \$3 000** in the Balance Sheet. Future depreciation would also be overstated because it is calculated on an inflated cost.
- c. The action breaches **faithful representation** — the reports are no longer complete, neutral and free from bias, because a real expense has been hidden and the asset and profit have been inflated. It is **unethical** because the

owner is **deliberately misrepresenting** the business's performance and position to make the profit look higher (here, to mislead users such as a lender), rather than reporting honestly.

Question 6

Cost component	\$
Purchase price	5 400
Delivery and assembly	600
Calibration and safety testing	400
Cost of treadmill	6 400

Cost of treadmill = \$5 400 + \$600 + \$400 = **\$6 400**. (The annual service plan \$300 is an ongoing running cost — an expense — not part of the cost.)

- Any two of: the treadmill's **description and identifying number**; the **date acquired**; the **cost**; the **location** within the gym; the **supplier**; and (once studied) its **depreciation** details.
- For example: **label and record** each machine in the asset register and periodically check the machines present against the register; **restrict access** to the equipment area and secure the premises with locks and an alarm; and **insure** the equipment. Any of these reduces the risk of **theft, loss or misuse** of the assets.

Question 7

The purchase price, delivery, the tray and canopy fitted, and the stamp duty are all necessary to **acquire the ute and get it ready for use**, so all four are **capitalised**. Stamp duty is a government transfer duty (GST-free) and is a genuine cost of acquiring the vehicle.

Cost component	\$
Purchase price	29 000
Delivery	500
Tray and canopy fitted	3 000
Stamp duty	580
Cost of ute	33 080

Cost of ute = \$29 000 + \$500 + \$3 000 + \$580 = **\$33 080**. The **registration \$800** and **insurance \$1 100** are **excluded** — they are **ongoing running costs** (revenue expenditure) that keep the ute operating each year, not part of the price paid to acquire it, so they are reported as expenses.

Question 8

Each amount is GST-inclusive, so the GST-exclusive cost is 10/11 of each (GST = 1/11): purchase \$33 000 → net \$30 000 (GST \$3 000); delivery \$1 320 → net \$1 200 (GST \$120); safety cage \$880 → net \$800 (GST \$80). All three are necessary to acquire the forklift and ready it for use, so all are capitalised.

Cost component	\$
Purchase price (ex-GST)	30 000
Delivery (ex-GST)	1 200
Operator safety cage (ex-GST)	800
Cost of forklift	32 000

Cost of forklift = \$30 000 + \$1 200 + \$800 = **\$32 000**. Total GST recorded in **GST Clearing** = \$3 000 + \$120 + \$80 = **\$3 200**.

Question 9

The purchase price, freight, installation and the commissioning test batch are all necessary to acquire the machine and get it working for the first time, so all four are **capitalised**.

Cost component	\$
Purchase price	45 000
Freight	1 200
Installation	2 400
Commissioning test batch	900
Cost of machine	49 500

Cost of machine = \$45 000 + \$1 200 + \$2 400 + \$900 = **\$49 500**. The **staff training \$1 500**, the **annual maintenance contract \$2 000** and the **consumables \$3 500** are **revenue expenditure** — they are ongoing running costs that benefit the period of use, not part of acquiring the machine — so all three are reported as **expenses**.

Question 10

The purchase price, transport, the pre-use replacement of tyres and brakes, and the pre-use repaint are all necessary to **acquire the truck and get it into a usable, roadworthy condition before its first use**, so all four are **capitalised**.

Cost component	\$
Purchase price	21 000
Transport to yard	900
Tyres and brakes (pre-use)	2 100
Repaint in business colours (pre-use)	1 000
Cost of truck	25 000

Cost of truck = \$21 000 + \$900 + \$2 100 + \$1 000 = **\$25 000**. The two repairs are treated differently because of their **timing and purpose**: the tyres, brakes and repaint were needed to make the truck **usable for the first time**, so they are **capital** expenditure (part of the cost); the tailgate repair happened **three months after the truck was already in service**, merely keeping an existing asset running, so it is **revenue** expenditure (an expense of \$800). The **registration \$700** is also an ongoing running cost — an expense.

Question 11

The purchase price, delivery and assembly/installation are all necessary to acquire the new shelving and get it ready for use, so they are **capitalised**.

Cost component	\$
Purchase price	8 000
Delivery	400
Assembly and installation	1 200
Cost of new shelving	9 600

Cost of new shelving = \$8 000 + \$400 + \$1 200 = **\$9 600**. The **\$600 to remove and dispose of the old shelving** is **not** part of the cost of the **new** asset — it does not help acquire the new shelving or get it ready for use; it is a cost of getting rid of the **old** asset. It is therefore treated as an **expense** (revenue expenditure), not capitalised into the new shelving.

Question 12

An **asset register** would give *Aldgate Bakery* one record for each oven, mixer and display unit, recording its **identifying number, the shop it is located in, the date it was acquired, its cost, and its service history**. Two clear benefits: first, the owner would know **exactly what the business owns and where each item is**, so equipment can be checked physically against the register across all four shops to detect **theft, loss or items that have been moved** — restoring the control lost as the business grew; second, the register supports **accurate depreciation and reporting**, and provides the detail needed to **insure** the equipment adequately and to plan **replacements** as assets age.

A program of **scheduled (preventive) maintenance** would set a planned service date for each item rather than waiting for it to break down. Two benefits: first, regular servicing keeps the ovens and mixers **working reliably and extends their useful life**, avoiding the lost trading time and rushed, costly repairs that follow an unexpected breakdown in a busy bakery; second, planned maintenance helps protect **staff safety and product quality**, and lets the business **budget** for servicing costs in advance instead of meeting them as emergencies. Together, the register (knowing what it owns and its condition) and scheduled maintenance (keeping it in good order) let the business protect and get the most from the substantial amount invested in its non-current assets.

Question 13

The owner's instruction is **unethical** because it deliberately **misrepresents** the business's results to obtain a loan. Including \$5 000 of ordinary **repairs** and \$2 000 of **staff training** — both **revenue expenditure** — in the cost of the machine hides \$7 000 of expenses that should appear in the Income Statement.

Effect on the reports. Expenses are understated by \$7 000, so this year's **net profit is overstated by \$7 000**. The machine (a non-current asset) is inflated by \$7 000, so **assets and owner's equity are overstated by \$7 000** in the Balance Sheet. In **future** periods, **depreciation is overstated** because it is calculated on an inflated cost, distorting profit again in later years. The reports therefore mislead in the current year **and** beyond.

Qualitative characteristic. The action breaches **faithful representation** — the reports are no longer **complete, neutral and free from bias**, because real expenses have been concealed and the asset and profit inflated. (It also undermines **relevance**, since users are given information that does not honestly reflect the business's performance.)

Stakeholders harmed. The **bank** may lend on the strength of an overstated profit and asset base and is exposed to greater risk of not being repaid; the **owner** risks a loan the business cannot really support, and serious loss of trust — and possibly legal consequences — if the misstatement is discovered; the **bookkeeper** is being asked to act against professional ethics; and any future **buyer or investor** relying on the reports would be misled. The ethical course is to record the repairs and training as **expenses** and present the business's true results, even if the profit looks lower.

Question 14

Judged on cost alone, the diesel van is \$12 000 cheaper, but an ethical decision weighs the asset's **social and environmental** impact as well as its price. On the **environmental** side, the diesel van has higher **fuel use and emissions**, contributing more to air pollution and greenhouse gases over its whole life, whereas the electric van is **lower-emission and quieter** and may be cheaper to run — so part of the diesel van's true cost is a **cost borne by the wider community and environment** that the \$40 000 price tag does not show. On the **social** side, the quieter, cleaner van is better for the neighbourhoods the business delivers to and signals to customers and staff that the business takes its **responsibilities** seriously; the business might also consider how each van was **manufactured and sourced** and how it will be **disposed of** at the end of its life.

An ethical decision may therefore **not** simply be the cheapest one: the owner should weigh the \$12 000 saving against the environmental and social costs of the higher-emission van, the potential **fuel and running-cost savings** of the electric van, and the reputational benefit of the responsible choice. A business acting ethically is willing, at least sometimes, to **pay more for the option with the lower social and environmental cost** — while still ensuring the choice is financially sustainable. (Reasonable answers may favour either van, provided the social and environmental considerations are genuinely weighed against cost.)

Question 15

Capital expenditure is spending that **acquires a non-current asset, or improves an existing one so that it does more or lasts longer than before**. Its benefit extends over **more than one** reporting period, so it is **added to the cost of the asset** (capitalised) and appears in the **Balance Sheet** — for example, the \$2 400 paid to **install** a new machine, or a major **upgrade** that extends a machine's useful life.

Revenue expenditure is spending on the **day-to-day running** of an asset whose benefit is used up in the **current period**. It is recorded as an **expense** and appears in the **Income Statement** — for example, the **registration** or a routine **service** of a delivery vehicle.

The distinction matters because misclassifying one as the other **misstates both reports**. Wrongly treating **capital expenditure** as revenue understates profit and understates assets now (and understates future depreciation); wrongly

treating **revenue** expenditure as capital **overstates profit and overstates assets** now, and overstates depreciation later. Only when each outlay is classified correctly do the **Income Statement** (profit) and the **Balance Sheet** (assets) give a **faithful representation** of the business's performance and position.

Question 16

Scheduled maintenance. Servicing the forklift and delivery van on a **planned schedule** — rather than only after a breakdown — keeps them running reliably and **extends their useful life**, and it reduces the chance of the kind of **unplanned breakdown** the business suffered, which brings lost trading time and rushed, expensive repairs. Regular inspection of the **power tools** also catches faults early and helps protect **staff safety**. Because services are planned, the business can also **budget** for them instead of meeting them as emergencies.

Security controls. Physical controls reduce the risk of another **break-in** and of loss or misuse: storing tools and the forklift in a **locked, alarmed** area; **labelling** each asset and recording it in the **asset register**, then periodically checking the assets present against the register to detect theft quickly; **restricting access** to authorised staff; and holding adequate **insurance** so that the financial loss from a theft, fire or accident is transferred to the insurer. Together, maintenance (keeping assets working and safe) and security (keeping them from being stolen, damaged or misused) protect the substantial benefit the business has locked up in its non-current assets, reducing both the losses it has already suffered and the risk of them recurring.

Question 17

Each item is judged on whether it **improves** the lathe (capital) or merely **keeps it running** (revenue). The **\$3 000 more powerful motor increases the lathe's capacity and extends its useful life** — it makes the asset do more and last longer than before, so it is a **capital improvement**, capitalised into the asset's cost. The **routine oiling and blade replacement (\$450)** and the **breakdown repair (\$700)** merely keep an existing, already-usable lathe running, benefiting the current period only, so both are **revenue expenditure** (expenses).

Asset register — lathe	\$
Cost brought forward	20 000
Add capital improvement (new motor)	3 000
Updated cost of lathe	23 000

Updated cost of the lathe = \$20 000 + \$3 000 = **\$23 000**. Total **revenue expenditure** (expensed) = \$450 + \$700 = **\$1 150** (the oiling/blade replacement and the breakdown repair). GST on each item is recorded in GST Clearing.

Question 18

The owner's plan is **unethical** on two fronts, and it breaches the way non-current assets must be valued and disclosed.

Valuation at above historical cost. Non-current assets are recorded on the **historical cost** basis — the actual, **verifiable** amount sacrificed to acquire them and get them ready for use — precisely because that figure can be checked against **source documents** and is **free from bias**. Writing the premises and equipment up to the owner's estimate of **current market value** replaces a verifiable figure with an **unverifiable, self-serving** one, inflating assets and owner's equity to make the business look stronger than it is. This breaches **faithful representation** (the reports would no longer be neutral or free from bias) and **verifiability** (the inflated values cannot be independently checked).

Concealing the condition of the assets. Deliberately **not disclosing** that much of the equipment is old and near the end of its useful life withholds **relevant** information from users. A prospective buyer is entitled to a **complete and honest** picture so they can judge what the assets are really worth and what will soon need replacing; hiding this makes the reports misleading.

Stakeholders. A **buyer** could pay far too much for the business, relying on overstated asset values and unaware that the equipment is nearly worn out; a **lender** relying on the Balance Sheet would misjudge the security behind a loan; and the **owner** risks the sale collapsing, legal action for misrepresentation, and lasting damage to their reputation once the true position emerges. The ethical course is to value the assets at **historical cost**, **disclose** their age and condition honestly (and, from 16B, their accumulated depreciation and carrying amount), and let the reports give a **faithful** picture — even though that makes the business look less impressive to a buyer.

Chapter 16 Managing non-current assets — 16B Depreciation and methods of depreciation

Theory

A **non-current asset** — a delivery van, an oven, a set of computers — is bought to be *used* in the business over several reporting periods, not resold. As it is used, it wears out, is superseded by newer technology, or simply moves closer to the end of its working life. The cost of that asset is therefore an economic sacrifice that helps the business earn revenue in **every period the asset is used**, not only in the period it was purchased.

Depreciation is the **allocation of the cost of a non-current asset over its useful life**. It spreads the asset's cost across the periods that benefit from using it, so that each period's Income Statement carries a fair share of that cost as an expense. Depreciation is an application of the **accrual basis** and the **period assumption**: the cost of *consuming* the asset is matched to the periods in which the asset helps generate revenue, rather than being written off in full when the asset is bought.

Three amounts drive every depreciation calculation:

- **Cost** — what the business paid to acquire the asset and make it ready for use.
- **Residual value** (or scrap value) — the amount the business *estimates* it will recover when it disposes of the asset at the end of its useful life.
- **Useful life** — the *estimated* number of periods the business expects to use the asset.

Because residual value and useful life are **estimates**, depreciation is itself an estimate — a reasonable allocation, not an exact measurement of how much the asset has “lost in value”.

Depreciation is not a fall in market value. Depreciation allocates *cost*; it does not attempt to restate the asset to what it would sell for today. An asset can be worth more on the open market than its recorded value and still be depreciated, because depreciation answers “how much of this asset's cost has been used up?”, not “what is this asset worth now?”.

Carrying amount (or book value) is the asset's cost less the **accumulated depreciation** charged against it to date:

Carrying amount = Cost – Accumulated depreciation

Accumulated depreciation is the running total of every depreciation charge made against the asset since it was acquired. It grows each period, so the carrying amount falls each period, moving the asset steadily towards its residual value.

The straight-line method. The **straight-line method** allocates the **same amount of depreciation to every period** of the asset's life:

Straight-line depreciation per period = (Cost – Residual value) ÷ Useful life

The numerator (cost – residual) is the **total depreciable amount** — the part of the cost that will be used up over the asset's life. Dividing it evenly by the useful life gives a **constant** annual charge, so straight-line best suits assets that deliver a **steady, even flow of economic benefit** across their life (office furniture, shop fittings, buildings).

The reducing-balance method. The **reducing-balance method** applies a **fixed percentage rate to the asset's carrying amount** at the start of each period:

Reducing-balance depreciation = Rate % × Carrying amount (at the start of the period)

Because the carrying amount falls every period, the same rate produces a **large charge early and a smaller charge each year after**. Note two things:

- The **residual value is not used** in the reducing-balance calculation — the rate is applied to carrying amount, not to (cost – residual). It remains the business's estimate of what it expects to recover at the end of the asset's useful life, but it plays no part in working out the annual charge.
- The charge **never reduces the carrying amount to zero**; it approaches, but never quite reaches, a small balance.

Reducing balance suits assets that give up **most of their benefit in the early years** and become less productive — or more expensive to run and maintain — as they age (vehicles, computers, machinery subject to rapid technological change).

Comparing the two methods — the pattern of expense. For the *same* asset, the two methods allocate the *same kind* of cost but in a **different pattern over time**:

- **Straight-line** spreads the expense **evenly**; every period bears an identical charge.
- **Reducing balance** is **front-loaded** — a high charge in the early periods that tapers away. Its early charges are larger than straight-line's and its later charges are smaller, so the two schedules “cross over” partway through the asset's life.

Because reducing balance charges more expense early, it reports **lower net profit in the early years** (and a lower carrying amount on the Balance Sheet), then higher profit later; straight-line reports a **steady** profit effect throughout. Over the whole life both methods allocate cost to expense, but the timing — and therefore the profit reported in any single year — differs.

Selecting a method. A business should choose the method whose **pattern of allocation best matches the pattern in which the asset's economic benefit is consumed** (a *faithful representation* of how the asset is used). Reducing balance is appropriate where an asset is worked hardest, or loses usefulness fastest, early in its life; straight-line is appropriate where the asset contributes evenly. Whichever method is chosen, it should be **applied consistently** from period to period so that results are **comparable** over time; a method should be changed only for a sound accounting reason, and the change disclosed.

Ethical considerations. The depreciation method, the estimated useful life and the estimated residual value are all choices made by the business, and every one of them changes the profit it reports. That gives an owner room to **flatter the figures**: choosing straight-line over reducing balance (or stretching the useful life, or inflating the residual value) lowers the depreciation expense in the early years and lifts reported profit — handy when applying for a loan, attracting an investor or preparing a business for sale. Making such a choice to *manufacture* a more attractive profit, rather than to reflect how the asset is genuinely used, breaches **faithful representation**: the reports would no longer be complete, neutral and free from bias. It also undermines **comparability** if the method is switched from year to year to suit the owner's purpose. The ethical position is to select the method that best reflects the asset's real pattern of use, base the useful-life and residual estimates on honest expectations, apply the method consistently, and disclose the basis chosen so that users of the reports are not misled.

Rounding convention (used throughout this section). Depreciation is calculated to the **nearest whole dollar**. Accumulated depreciation is the running total of the rounded annual charges, and each period's carrying amount = cost – accumulated depreciation (so a rounded charge is carried forward). Straight-line divisions in these examples are exact; only reducing balance produces amounts that need rounding (see Question 8).

Worked model. Brightwater Couriers buys a delivery van for \$32 000. It estimates a residual value of \$2 000 and a useful life of 4 years. Under **straight-line**, the annual charge is $(\$32\,000 - \$2\,000) \div 4 = \$7\,500$, the same every year:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	32 000
1	7 500	7 500	24 500
2	7 500	15 000	17 000
3	7 500	22 500	9 500
4	7 500	30 000	2 000

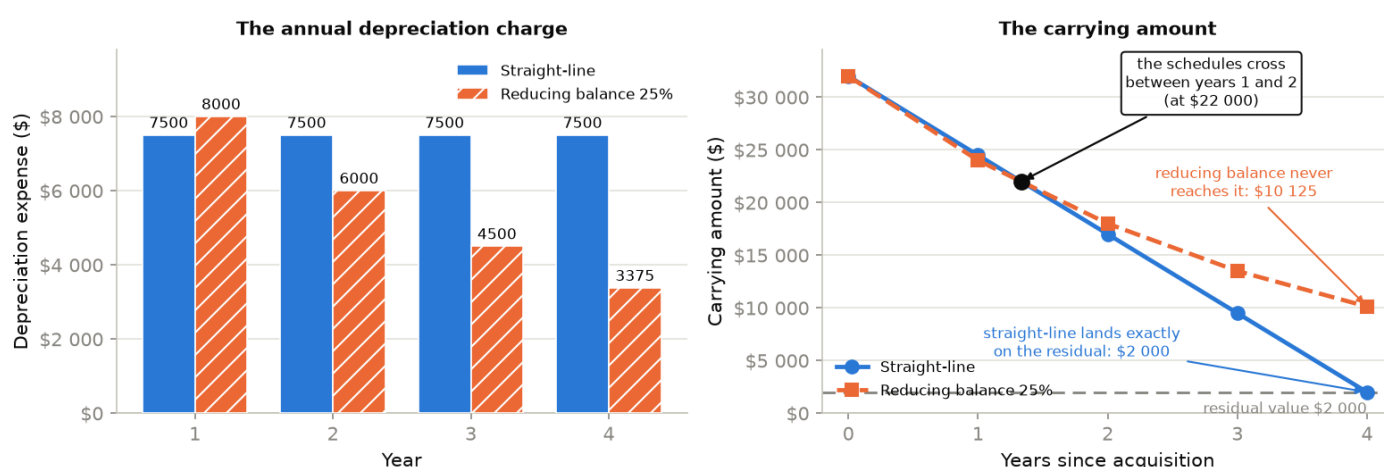
After 4 years the carrying amount equals the \$2 000 residual — straight-line writes the depreciable amount down exactly. Under **reducing balance at 25% per year**, the same van is depreciated by applying 25% to its carrying amount at the start of each year:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	32 000
1	8 000	8 000	24 000
2	6 000	14 000	18 000
3	4 500	18 500	13 500
4	3 375	21 875	10 125

Year 1's charge (\$8 000) is $32\,000 \times 25\%$; year 2's (\$6 000) is $24\,000 \times 25\%$; and so on. The charge falls every year and the carrying amount (\$10 125 after 4 years) never reaches the residual — the pattern of expense is front-loaded, unlike straight-line's flat \$7 500.

Setting the two schedules side by side shows the difference in **pattern** that the tables can only imply:

Brightwater Couriers — delivery van, cost \$32 000, residual \$2 000, 4-year life



Reducing balance charges MORE than straight-line in year 1 and LESS in every year after, so it reports lower net profit early and higher net profit late; over the whole life both methods allocate cost to expense — only the timing differs.

Brightwater Couriers — delivery van under straight-line and reducing balance

On the left, straight-line's bars are identical every year while reducing balance's fall away: \$8 000 in year 1 (more than straight-line), then \$6 000, \$4 500 and \$3 375 (each less). On the right, the two carrying-amount lines start together at cost and **cross between years 1 and 2**, at \$22 000 — reducing balance is below straight-line for the first year, and above it from then on. Straight-line ends exactly on the \$2 000 residual, because it divides the depreciable amount evenly; reducing balance ends at \$10 125 and, applying a percentage to a shrinking base, would never reach the residual however long the asset were held. Over the four years both methods allocate cost to expense — only the **timing** differs, and with it the profit reported in any single year.

Worked examples (scaffolded)

Example 1 — a straight-line depreciation schedule

Ashfield Dental buys a dental chair for \$18 000. It estimates the chair will be used for 5 years and then sold for \$3 000. Prepare the straight-line depreciation schedule for the full 5 years.

Working	Comment
Depreciable amount = cost – residual = $18\,000 - 3\,000 = \$15\,000$.	Only the part of the cost that will be <i>used up</i> is depreciated; the \$3 000 residual is expected to be recovered on disposal.
Annual depreciation = $15\,000 \div 5 = \$3\,000$.	Straight-line divides the depreciable amount evenly over the useful life, so every year's charge is identical.
Accumulated depreciation rises by \$3 000 each year: \$3	Accumulated depreciation is the running total of the

Working	Comment
000, \$6 000, \$9 000, \$12 000, \$15 000.	charges to date.
Carrying amount = cost – accumulated depreciation, e.g. end of year 3 = \$18 000 – \$9 000 = \$9 000 .	The carrying amount falls by \$3 000 each year and reaches the \$3 000 residual at the end of year 5.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	18 000
1	3 000	3 000	15 000
2	3 000	6 000	12 000
3	3 000	9 000	9 000
4	3 000	12 000	6 000
5	3 000	15 000	3 000

Example 2 — a reducing-balance depreciation schedule

Meridian Print buys a printing press for \$40 000 and depreciates it at 20% per year using the reducing-balance method. Prepare the depreciation schedule for the first 4 years.

Working	Comment
Year 1 depreciation = $20\% \times \$40\,000$ (carrying amount at start) = \$8 000 .	The rate is applied to the carrying amount, which at the start of year 1 is the full cost.
Year 1 carrying amount = $\$40\,000 - \$8\,000 = \$32\,000$.	The charge reduces the carrying amount, which becomes the base for next year.
Year 2 depreciation = $20\% \times \$32\,000 = \$6\,400$; carrying amount = $\$32\,000 - \$6\,400 = \$25\,600$.	Because the base is smaller, the charge is smaller than year 1 — the “reducing” balance.
Year 3 = $20\% \times \$25\,600 = \$5\,120$; year 4 = $20\% \times \$20\,480 = \$4\,096$.	The residual value is <i>not</i> used anywhere in the calculation; the rate simply keeps reducing the balance.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	40 000
1	8 000	8 000	32 000
2	6 400	14 400	25 600
3	5 120	19 520	20 480
4	4 096	23 616	16 384

Worked examples (unscaffolded)

Example 3 — comparing the two methods for one asset

Kingsford Café buys an espresso machine for \$25 000, with an estimated residual value of \$5 000 and a useful life of 4 years. The owner wants to see the depreciation charge under both the straight-line method and the reducing-balance method at 40% per year, and to understand how the two patterns differ.

Straight-line: $(\$25\,000 - \$5\,000) \div 4 = \$5\,000$ per year, the same every year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	25 000
1	5 000	5 000	20 000

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
2	5 000	10 000	15 000
3	5 000	15 000	10 000
4	5 000	20 000	5 000

Reducing balance at 40%: each year's charge is 40% of the carrying amount at the start of the year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	25 000
1	10 000	10 000	15 000
2	6 000	16 000	9 000
3	3 600	19 600	5 400
4	2 160	21 760	3 240

In year 1 reducing balance charges \$10 000 against just \$5 000 under straight-line — \$5 000 more expense, and so \$5 000 less profit. By years 3 and 4 the reducing-balance charge (\$3 600, then \$2 160) has fallen *below* the flat \$5 000, so it now reports the higher profit. The methods allocate cost in opposite patterns over time: reducing balance is front-loaded, straight-line is even.

∴ straight-line gives a constant \$5 000 charge, while reducing balance front-loads the expense (\$10 000 → \$2 160); the choice changes *when* the cost hits profit, not the fact that the asset's cost is allocated across its life.

Example 4 — selecting a method and preparing the schedule

Larkspur Landscaping buys a ride-on mower for \$14 000 (estimated residual \$2 000, useful life 4 years). The mower does the bulk of its work — clearing and levelling new sites — in its first year or two, and is used far more lightly once the business's established gardens only need light maintenance. Recommend a depreciation method, justify it, and prepare a schedule for the first 3 years under the recommended method.

The mower consumes most of its economic benefit early in its life, so a **reducing-balance** method gives a more faithful representation of how it is used than the flat straight-line charge (which would be $(\$14\,000 - \$2\,000) \div 4 = \$3\,000$ every year regardless of how hard the mower works). Applying a reducing-balance rate of 40%:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	14 000
1	5 600	5 600	8 400
2	3 360	8 960	5 040
3	2 016	10 976	3 024

The large early charges (\$5 600, then \$3 360) match the heavy early use, and the smaller later charge (\$2 016) matches the mower's lighter maintenance role — a closer match to the pattern of benefit than a flat \$3 000.

∴ reducing balance at 40% is recommended, giving depreciation of \$5 600, \$3 360 and \$2 016 across the first 3 years and a carrying amount of \$3 024 at the end of year 3.

Practice questions — scaffolded

Question 1

Oakridge Physio buys a treatment table for \$9 000. It expects to use the table for 5 years and then sell it for \$1 500. The straight-line method is used.

- Calculate the annual depreciation charge.

- b. Prepare the depreciation schedule for the full 5 years.
- c. State the carrying amount of the table at the end of year 3.

Question 2

Vertex Gym buys a set of rowing machines for \$20 000 and depreciates them at 20% per year using the reducing-balance method.

- a. Calculate the depreciation charge for year 1.
- b. Prepare the depreciation schedule for the first 4 years.
- c. State the carrying amount of the rowing machines at the end of year 4.

Question 3

Brookdale Bakery buys a commercial oven for \$16 000 (estimated residual value \$1 000, useful life 5 years). The owner is deciding between the straight-line method and the reducing-balance method at 25% per year.

- a. Calculate the annual straight-line depreciation charge.
- b. Calculate the reducing-balance depreciation charge for year 1 and for year 2.
- c. State which method gives the higher depreciation expense in year 1, and by how much.

Question 4

Riverstone Florists buys a delivery van for \$28 000 (estimated residual value \$4 000, useful life 4 years).

- a. Calculate the annual straight-line depreciation charge.
- b. A van typically loses most of its value in its early years. State which method would better reflect this pattern, and justify your choice in one or two sentences.
- c. Explain, in one or two sentences, what is meant by describing depreciation as “the allocation of an asset’s cost over its useful life”.

Question 5

Halcyon Design buys computer equipment for \$8 000 and depreciates it at 50% per year using the reducing-balance method.

- a. Prepare the depreciation schedule for the first 3 years.
- b. State the depreciation expense reported in the Income Statement for year 2.
- c. State the carrying amount reported for the equipment in the Balance Sheet at the end of year 3.

Question 6

Maple Grove Winery buys a bottling machine for \$22 000 (estimated residual value \$2 000, useful life 5 years). The straight-line method is used.

- a. Calculate the annual depreciation charge.
- b. Prepare the depreciation schedule for the full 5 years.
- c. Explain why the accumulated depreciation grows each year even though the annual charge stays the same.

Practice questions — unscaffolded

Question 7

Ferngully Café buys a refrigeration unit for \$13 500 (estimated residual value \$1 500, useful life 4 years) and uses the straight-line method. Prepare the depreciation schedule for the full 4 years and state the carrying amount at the end of year 4.

Question 8

Titan Logistics buys a forklift for \$36 000 and depreciates it at 25% per year using the reducing-balance method. Prepare the depreciation schedule for the first 4 years, rounding each year's depreciation to the nearest whole dollar, and state the carrying amount at the end of year 4.

Question 9

Cascade Cinemas buys a projector for \$30 000 (estimated residual value \$6 000, useful life 4 years). Prepare a depreciation schedule under the straight-line method and a second schedule under the reducing-balance method at 30% per year. State in which years the reducing-balance charge is larger than the straight-line charge, and in which years it is smaller.

Question 10

Meadowbank Consulting is deciding how to depreciate two newly purchased assets: a set of office desks that will be used steadily for many years, and a delivery truck that will be driven hardest in its first two or three years. Recommend a depreciation method for each asset and justify each recommendation with reference to the pattern in which the asset's economic benefit is consumed.

Question 11

An asset is depreciated using the straight-line method. It cost \$21 000, has an estimated residual value of \$3 000, and is depreciated by \$3 600 each year. Calculate the useful life the business has estimated for the asset.

Question 12

An asset that cost \$50 000 is depreciated using the reducing-balance method. The depreciation charged in year 1 is \$10 000. Determine the reducing-balance rate the business is applying, and calculate the depreciation charge for year 2.

Question 13

Nordic Interiors buys display shelving for \$10 000 and depreciates it at 30% per year using the reducing-balance method. Prepare the depreciation schedule for the first 3 years and state the carrying amount that would appear in the Balance Sheet at the end of year 2.

Question 14

Silverbrook Clinic buys an X-ray machine for \$60 000 (estimated residual value \$12 000, useful life 6 years) and uses the straight-line method. Prepare the depreciation schedule for the full 6 years, and state (i) the total depreciation charged over the asset's life and (ii) the carrying amount at the end of year 6. Explain briefly how these two figures relate to the machine's cost and residual value.

Question 15

Emberton Autos buys a vehicle hoist for \$18 000 (estimated residual value \$2 000, useful life 4 years). Under the straight-line method the annual charge would be \$4 000; under the reducing-balance method at 25% the year-1 charge would be \$4 500. State which method reports the lower net profit in year 1, and calculate the difference in the year-1 net profit under the two methods (assume all other revenues and expenses are the same).

Question 16

Explain what depreciation is and why a business depreciates a non-current asset rather than treating its whole cost as an expense in the year of purchase. In your answer, refer to a relevant accounting assumption, and distinguish depreciation from a fall in the asset's market value.

Question 17

Brightwater Couriers is preparing its reports to support a loan application. Its delivery vans have been depreciated using the reducing-balance method since they were bought. The owner suggests switching the vans to the straight-line method for this year "because it will show a smaller depreciation expense and a higher profit, which will look better to

the bank”. Discuss the ethical considerations the owner should weigh before making this change, referring to at least one qualitative characteristic.

Question 18

Brightpath Couriers buys a delivery truck for \$64 000 (estimated residual value \$20 000, useful life 4 years). Prepare a depreciation schedule under the straight-line method and a second schedule under the reducing-balance method at 25% per year. Compare the pattern of the depreciation expense under the two methods, recommend one method for this truck with a justification, and state one thing the business should do to keep its reports comparable once the method is chosen.

Answers

1.
 - a. \$1 500 b. see schedule c. \$4 500
2.
 - a. \$4 000 b. see schedule c. \$8 192
3.
 - a. \$3 000 b. year 1 \$4 000, year 2 \$3 000 c. reducing balance, by \$1 000
4.
 - a. \$6 000 b. reducing balance c. see solutions
5.
 - a. see schedule b. \$2 000 c. \$1 000
6.
 - a. \$4 000 b. see schedule c. see solutions
7. Annual \$3 000; carrying amount at end of year 4 = \$1 500
8. Year 1 \$9 000, year 2 \$6 750, year 3 \$5 063, year 4 \$3 797; carrying amount \$11 390
9. Straight-line \$6 000 each year; reducing balance \$9 000, \$6 300, \$4 410, \$3 087; RB larger in years 1–2, smaller in years 3–4
10. Desks → straight-line; truck → reducing balance (see solutions)
11. 5 years
12. Rate 20%; year 2 depreciation \$8 000
13. Schedule; carrying amount at end of year 2 = \$4 900
14. Annual \$8 000; total depreciation \$48 000; carrying amount \$12 000
15. Reducing balance reports the lower profit; difference \$500
16. See solutions
17. See solutions
18. Straight-line \$11 000 each year; reducing balance \$16 000, \$12 000, \$9 000, \$6 750 (see solutions)

Fully-worked solutions

Question 1

- a. Depreciation = $(\$9\,000 - \$1\,500) \div 5 = \$7\,500 \div 5 = \mathbf{\$1\,500}$ per year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	9 000
1	1 500	1 500	7 500
2	1 500	3 000	6 000
3	1 500	4 500	4 500
4	1 500	6 000	3 000
5	1 500	7 500	1 500

- c. Carrying amount at the end of year 3 = $\$9\,000 - \$4\,500 = \mathbf{\$4\,500}$.

Question 2

- a. Year 1 depreciation = $20\% \times \$20\,000 = \mathbf{\$4\,000}$.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	20 000
1	4 000	4 000	16 000
2	3 200	7 200	12 800

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
3	2 560	9 760	10 240
4	2 048	11 808	8 192

- c. Carrying amount at the end of year 4 = **\$8 192**.

Question 3

- Straight-line = $(\$16\,000 - \$1\,000) \div 5 = \$15\,000 \div 5 = \mathbf{\$3\,000}$ per year.
- Reducing balance at 25%: year 1 = $25\% \times \$16\,000 = \mathbf{\$4\,000}$; carrying amount = $\$12\,000$. Year 2 = $25\% \times \$12\,000 = \mathbf{\$3\,000}$.
- In year 1 straight-line charges \$3 000 and reducing balance charges \$4 000, so **reducing balance gives the higher expense in year 1, by \$1 000**.

Question 4

- Straight-line = $(\$28\,000 - \$4\,000) \div 4 = \$24\,000 \div 4 = \mathbf{\$6\,000}$ per year.
- The **reducing-balance** method better reflects a van that loses most of its value early, because it charges a large depreciation expense in the early years and a smaller expense later — matching the pattern in which the van's economic benefit is consumed.
- Depreciation “allocates the cost over the useful life” because it spreads the van's cost across every period the van is used to earn revenue, charging each period a share of the cost as an expense, rather than writing the whole cost off in the year of purchase.

Question 5

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	8 000
1	4 000	4 000	4 000
2	2 000	6 000	2 000
3	1 000	7 000	1 000

- Depreciation expense reported in year 2 = $50\% \times \$4\,000 = \mathbf{\$2\,000}$.
- Carrying amount in the Balance Sheet at the end of year 3 = **\$1 000**.

Question 6

- Depreciation = $(\$22\,000 - \$2\,000) \div 5 = \$20\,000 \div 5 = \mathbf{\$4\,000}$ per year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	22 000
1	4 000	4 000	18 000
2	4 000	8 000	14 000
3	4 000	12 000	10 000
4	4 000	16 000	6 000
5	4 000	20 000	2 000

- Accumulated depreciation is the **running total** of every depreciation charge made so far. Even though each year's charge is the same \$4 000, each year that \$4 000 is *added to* the balance already accumulated, so the total keeps rising (and the carrying amount keeps falling).

Question 7

Straight-line = $(\$13\,500 - \$1\,500) \div 4 = \$12\,000 \div 4 = \text{\$3\,000}$ per year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	13 500
1	3 000	3 000	10 500
2	3 000	6 000	7 500
3	3 000	9 000	4 500
4	3 000	12 000	1 500

Carrying amount at the end of year 4 = **\$1 500** (equal to the residual value).

Question 8

Reducing balance at 25%, each year's charge = $25\% \times$ carrying amount at the start of the year, rounded to the nearest whole dollar.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	36 000
1	9 000	9 000	27 000
2	6 750	15 750	20 250
3	5 063	20 813	15 187
4	3 797	24 610	11 390

Year 3 = $25\% \times \$20\,250 = \$5\,062.50$, rounded to **\$5 063**; year 4 = $25\% \times \$15\,187 = \$3\,796.75$, rounded to **\$3 797**.

Carrying amount at the end of year 4 = **\$11 390**.

Question 9

Straight-line = $(\$30\,000 - \$6\,000) \div 4 = \$24\,000 \div 4 = \text{\$6\,000}$ each year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	30 000
1	6 000	6 000	24 000
2	6 000	12 000	18 000
3	6 000	18 000	12 000
4	6 000	24 000	6 000

Reducing balance at 30%:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	30 000
1	9 000	9 000	21 000
2	6 300	15 300	14 700
3	4 410	19 710	10 290
4	3 087	22 797	7 203

The reducing-balance charge is **larger than the straight-line \$6 000 in years 1 and 2** (\$9 000 and \$6 300) and **smaller in years 3 and 4** (\$4 410 and \$3 087). The two schedules cross over between years 2 and 3 — the signature front-loaded pattern of reducing balance versus the even pattern of straight-line.

Question 10

The **office desks** should be depreciated using the **straight-line** method. They are used steadily and deliver a roughly even flow of economic benefit across their long life, so a constant annual charge is the faithful representation of how their cost is consumed.

The **delivery truck** should be depreciated using the **reducing-balance** method. It is driven hardest in its first two or three years, consuming most of its economic benefit early (and losing value fastest early), so a front-loaded charge — large at first, then tapering — better matches the pattern in which the truck's benefit is used up.

Question 11

Straight-line depreciation = (cost – residual) ÷ useful life, so useful life = (cost – residual) ÷ annual depreciation = (\$21 000 – \$3 000) ÷ \$3 600 = \$18 000 ÷ \$3 600 = **5 years**.

Question 12

The reducing-balance rate applies to the carrying amount, which at the start of year 1 is the full cost, so rate = year-1 depreciation ÷ cost = \$10 000 ÷ \$50 000 = **20%**. Carrying amount at the end of year 1 = \$50 000 – \$10 000 = \$40 000, so year-2 depreciation = 20% × \$40 000 = **\$8 000**.

Question 13

Reducing balance at 30%:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	10 000
1	3 000	3 000	7 000
2	2 100	5 100	4 900
3	1 470	6 570	3 430

Carrying amount in the Balance Sheet at the end of year 2 = **\$4 900**.

Question 14

Straight-line = (\$60 000 – \$12 000) ÷ 6 = \$48 000 ÷ 6 = **\$8 000** per year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	60 000
1	8 000	8 000	52 000
2	8 000	16 000	44 000
3	8 000	24 000	36 000
4	8 000	32 000	28 000
5	8 000	40 000	20 000
6	8 000	48 000	12 000

- (i) Total depreciation charged over the life = **\$48 000**. (ii) Carrying amount at the end of year 6 = **\$12 000**. The total depreciation equals the depreciable amount (cost – residual = \$60 000 – \$12 000 = \$48 000), and the final carrying amount equals the estimated residual value (\$12 000) — straight-line writes the asset down to exactly its residual over its useful life.

Question 15

In year 1 the reducing-balance charge (\$4 500) is larger than the straight-line charge (\$4 000). A larger expense means a smaller net profit, so the **reducing-balance method reports the lower net profit in year 1**. The difference in year-1 net profit is \$4 500 – \$4 000 = **\$500** (reducing balance is \$500 lower).

Question 16

Depreciation is the allocation of the cost of a non-current asset over its useful life — spreading the asset's cost across the periods in which it is used to help earn revenue. A business depreciates the asset rather than expensing its whole cost in the year of purchase because of the **accrual basis** (and the period assumption): the asset provides economic benefit over several periods, so a share of its cost should be recognised as an expense in each of those periods, matching the cost of using the asset to the periods that benefit. This gives a more accurate profit figure for every period than dumping the entire cost into one. Depreciation is **not** a measure of the fall in the asset's market value: it allocates the asset's *cost*, based on estimates of useful life and residual value, and takes no account of what the asset would sell for on any given day — an asset can even be worth more than its carrying amount and still be depreciated.

Question 17

Switching the vans from reducing balance to straight-line *purely* to lower the current year's depreciation expense and lift reported profit for the bank is ethically questionable. The choice of method should reflect how the vans' economic benefit is genuinely consumed — and vehicles typically lose benefit fastest early, which is why reducing balance was chosen in the first place. Changing the method to engineer a more flattering profit compromises **faithful representation**: the reports would no longer be neutral and free from bias, and would present the business's performance more favourably than the facts support. It also harms **comparability**, because this year's profit would no longer be prepared on the same basis as prior years, making the trend misleading to the bank and to the owner. Presenting deliberately inflated figures to obtain finance could also mislead the lender into a decision it would not otherwise make. The ethical course is to keep applying the method that best reflects how the vans are used, change methods only for a genuine accounting reason (not to dress up the loan application), and disclose the basis used so that the bank is not misled.

Question 18

Straight-line = $(\$64\,000 - \$20\,000) \div 4 = \$44\,000 \div 4 = \$11\,000$ each year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	64 000
1	11 000	11 000	53 000
2	11 000	22 000	42 000
3	11 000	33 000	31 000
4	11 000	44 000	20 000

Reducing balance at 25%:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At acquisition	—	—	64 000
1	16 000	16 000	48 000
2	12 000	28 000	36 000
3	9 000	37 000	27 000
4	6 750	43 750	20 250

Under straight-line the charge is a flat \$11 000 every year; under reducing balance it starts at \$16 000 and tapers to \$12 000, \$9 000 and \$6 750 — the front-loaded pattern. The reducing-balance charge is the larger of the two in years 1 and 2 and the smaller in years 3 and 4, so the two schedules cross over between years 2 and 3: reducing balance reports the **lower** net profit in the first two years and the **higher** net profit in the last two. It also leaves a higher carrying amount at the end of year 4 (\$20 250 versus \$20 000), because the rate is applied to a balance that never quite writes the truck down to its residual value. A delivery truck is worked hardest and loses value fastest in its early years, so **reducing balance** is recommended as the more faithful representation of how the truck's benefit is consumed. Once the method is chosen, the business should **apply it consistently** from year to year (and disclose the basis) so that its reported results remain comparable over time.

Chapter 16 Managing non-current assets — 16C Reporting depreciation; calculation issues

Theory

A **non-current asset** — a vehicle, item of equipment, machine or fitting the business expects to use for **more than 12 months** — helps to earn revenue across **many reporting periods**, not just the one in which it is bought. Because the asset is *consumed* gradually as it is used, its cost must be **spread across the periods that benefit from it**, rather than being treated as an expense all at once when it is purchased. **Depreciation** is the **allocation of the cost of a non-current asset (less its estimated residual value) over its useful life**. It is an **expense**: the portion of the asset's cost that has been used up during the current period.

Allocating the cost this way applies the **period assumption** (the life of the business is divided into equal periods so that profit can be measured for each one) and the **accrual basis** (an expense is recognised in the period in which the benefit is consumed, not in the period the cash is paid). Land is **not depreciated**, because it has an indefinite useful life.

The straight-line method (recap from 16B). The **straight-line** method allocates an **equal amount** of depreciation to every full year of the asset's life:

$$\text{Depreciation per year} = \frac{\text{cost} - \text{estimated residual value}}{\text{estimated useful life (years)}}$$

The **cost** is the historical cost of the asset. The **estimated residual value** is the amount the business expects to recover when it disposes of the asset at the end of its useful life. The **depreciable amount** (cost – residual value) is the total cost expected to be consumed over the life of the asset.

Recording the depreciation adjustment. Depreciation is a **non-cash** expense — no money changes hands when it is recorded — so it does not belong in any of the cash or credit special journals. Instead, at the end of the reporting period, it is recorded in the **General Journal** as a balance-day adjustment. The account **debited** is the expense, **Depreciation –** ; the account **credited** is **Accumulated Depreciation –** :

General Journal — worked model (Lakebridge Landscaping)

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Mower	3 000	
	Accumulated		3 000
	Depreciation – Mower		
	<i>Memo 12: depreciation of the ride-on mower for the year (straight-line)</i>		

Why Accumulated Depreciation, and not the asset account? The credit goes to a separate **Accumulated Depreciation** account rather than reducing the asset directly. **Accumulated Depreciation** is a **contra (negative) asset** — it is deducted from the asset in the Balance Sheet. Recording depreciation here keeps the asset reported at its **original cost** while a *running total* of all depreciation charged to date builds up alongside it. A reader can then see **both** the historical cost of the asset **and** how much of that cost has been consumed. Each year the same entry is made, so the balance of Accumulated Depreciation **grows** period by period.

Reporting depreciation. The depreciation adjustment affects **two reports**:

- In the **Income Statement**, **Depreciation –** is reported as an **expense** for the period. Like every expense it **reduces net profit** for that period (and only that period's charge appears — the *current* year's depreciation, not the accumulated total).
- In the **Balance Sheet**, the non-current asset is reported at its **cost**, from which the **balance of Accumulated Depreciation** is deducted. The resulting figure is the asset's **carrying amount** (also called *carrying value* or *written-down value*):

$$\text{Carrying amount} = \text{cost} - \text{accumulated depreciation}$$

The **carrying amount** is the portion of the asset's cost **not yet allocated** to expense — the cost still to be consumed in future periods. It is **not** the asset's market value or the amount it could be sold for; it is simply the unexpired cost. Because Accumulated Depreciation grows each year, the carrying amount **falls** each year until it reaches the estimated residual value at the end of the asset's life.

Calculation issues. Three practical issues affect the size of the depreciation charge.

1. **Part-year depreciation.** An asset is rarely bought on the first day of a reporting period. Depreciation is charged only for the **number of months the asset is held** during the period:

$$\text{Part-year depreciation} = \text{annual depreciation} \times \frac{\text{months held}}{12}$$

An asset bought partway through the year is depreciated from the **date it is first used**; in its final year of life the same idea applies to the months up to disposal. A full year's charge is only ever recorded for a full year of use.

2. **The effect of the residual-value estimate.** Residual value is an **estimate**. A **higher** estimated residual value gives a **smaller** depreciable amount, so the **annual depreciation is lower**, net profit is higher and the carrying amount at any date is higher. A **lower** residual estimate does the reverse.
3. **The effect of the useful-life estimate.** Useful life is also an **estimate**. A **longer** estimated life spreads the depreciable amount over **more** years, so the **annual depreciation is lower** and the carrying amount falls more slowly. A **shorter** estimated life raises the annual charge.

Because both residual value and useful life are **estimates based on judgement**, depreciation is an **estimate, not an exact measurement**. Two businesses with identical assets can report different profits simply because they have made different, but equally reasonable, estimates. For reports to be **comparable** over time, a business should apply its estimates **consistently** and review them only when there is genuine evidence that the original judgement is no longer **faithful**.

Ethical considerations. Because the depreciation charge depends on estimates the owner or manager chooses, it is open to **manipulation**. Deliberately **overstating** the useful life or residual value lowers the depreciation expense and **inflates reported profit** — which might, for example, help a business meet a bank's loan condition or present a healthier result to a prospective buyer. Deliberately **understating** them does the reverse. Either choice, if made to engineer a particular profit figure rather than to reflect how the asset is genuinely expected to be used, breaches **faithful representation** (reports should be complete, free from material error and neutral — without bias) and misleads the very lenders, owners and other users who rely on the reports. Estimates should be made **in good faith** on reasonable evidence, reviewed honestly, applied **consistently**, and disclosed — so that the reported profit and carrying amount serve the users of the reports rather than the interests of the person preparing them.

Worked model. Lakebridge Landscaping buys a ride-on mower for **\$21 000**, estimating a **residual value of \$3 000** and a **useful life of 6 years**. The annual straight-line depreciation is $(\$21\,000 - \$3\,000) \div 6 = \$3\,000$. The General Journal entry above records the first year's charge. In the reports for the first year the Income Statement shows a **Depreciation – Mower** expense of \$3 000, and the Balance Sheet reports the mower at its \$21 000 cost less \$3 000 accumulated depreciation, a **carrying amount of \$18 000**.

Worked examples (scaffolded)

Example 1 — recording the adjustment and reporting the expense and carrying amount (full year)

Fernvale Couriers buys a **delivery van** on 1 July 2025 for **\$44 000**, estimating a **residual value of \$8 000** and a **useful life of 6 years**. The business uses the straight-line method and reports annually to 30 June. Record the depreciation for the year ended 30 June 2026 and report the expense and the van's carrying amount.

Working	Comment
Annual depreciation = $(\$44\,000 - \$8\,000) \div 6 = \$6\,000$	The depreciable amount (cost – residual) is spread evenly across the six-year life.
The van was held for the whole year (1 July – 30 June),	A full year's use earns a full year's depreciation.

Working	Comment
so a full \$6 000 is charged.	
General Journal: debit Depreciation – Delivery van \$6 000; credit Accumulated Depreciation – Delivery van \$6 000.	The expense is debited; the contra-asset is credited. Debit = credit, so the entry balances.
Income Statement: Depreciation – Delivery van \$6 000 (an expense reducing net profit).	Only the current year's charge is reported as the expense.
Balance Sheet: van \$44 000 less accumulated depreciation \$6 000 = carrying amount \$38 000 .	Carrying amount = cost – accumulated depreciation.

General Journal — Fernvale Couriers

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Delivery van	6 000	
	Accumulated Depreciation – Delivery van		6 000
	<i>Memo 30: depreciation of the delivery van for the year ended 30 June 2026</i>		

Income Statement (extract) for the year ended 30 June 2026

Fernvale Couriers	\$	\$
Less Other Expenses		
Depreciation – Delivery van	6 000	

Balance Sheet (extract) as at 30 June 2026

Fernvale Couriers	\$	\$
Non-Current Assets		
Delivery van	44 000	
Less Accumulated Depreciation – Delivery van	6 000	38 000

Example 2 — part-year depreciation

Cove Physiotherapy buys **treatment equipment** on **1 March 2026** for **\$18 000**, estimating a **residual value of \$3 000** and a **useful life of 5 years**. The business reports to 30 June. Record the depreciation for the year ended 30 June 2026 and state the carrying amount.

Working	Comment
Annual depreciation = $(\$18\,000 - \$3\,000) \div 5 = \$15\,000$ $\div 5 = \mathbf{\$3\,000}$.	This is a <i>full year's</i> charge; the equipment was not held for a full year.
Months held = 1 March to 30 June = 4 months .	Depreciation runs from the date the asset is first used.
Part-year depreciation = $\$3\,000 \times 4 \div 12 = \mathbf{\$1\,000}$.	Only the four months of use in this period are charged.
Carrying amount = $\$18\,000 - \$1\,000 = \mathbf{\$17\,000}$.	Cost less the accumulated depreciation to date (here, one part-year charge).

General Journal — Cove Physiotherapy

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Equipment	1 000	
	Accumulated		1 000
	Depreciation – Equipment		
	<i>Memo 8: depreciation of treatment equipment for 4 months (1 March – 30 June)</i>		

∴ the Income Statement reports a \$1 000 depreciation expense and the Balance Sheet reports the equipment at a carrying amount of \$17 000.

Worked examples (unscaffolded)

Example 3 — the effect of the estimates

Harlow Print Studio is deciding how to depreciate a **printing machine** that cost **\$60 000**. Under **estimate A** it expects a residual value of \$6 000 and a useful life of 6 years; under **estimate B** it expects a residual value of \$12 000 and a useful life of 8 years. Compare the annual depreciation and the carrying amount after two years under each estimate.

Under estimate A the annual depreciation is $(\$60\,000 - \$6\,000) \div 6 = \mathbf{\$9\,000}$; under estimate B it is $(\$60\,000 - \$12\,000) \div 8 = \mathbf{\$6\,000}$. Estimate B — the higher residual value **and** the longer life — gives the **smaller** annual expense, \$3 000 lower than estimate A. A smaller depreciation expense raises net profit by \$3 000 each year, and leaves a **higher** carrying amount: after two years the carrying amount under estimate A is $\$60\,000 - \$18\,000 = \$42\,000$, whereas under estimate B it is $\$60\,000 - \$12\,000 = \$48\,000$.

∴ the estimates chosen change both the reported profit and the reported carrying amount, even though the machine and its cost are identical — so the estimates must be genuine judgements, not a means of engineering a chosen result.

Example 4 — a depreciation schedule and reporting in a later year

Trenton Freightlines buys a **truck** for **\$90 000**, estimating a **residual value of \$18 000** and a **useful life of 6 years**, and depreciates it using the straight-line method. Prepare a depreciation schedule for the first three years and report the truck at 30 June 2026 (the end of year 3).

The annual depreciation is $(\$90\,000 - \$18\,000) \div 6 = \mathbf{\$12\,000}$. Each year the same \$12 000 is charged; the accumulated depreciation grows by \$12 000 and the carrying amount falls by \$12 000:

Year ended	Depreciation expense \$	Accumulated depreciation \$	Carrying amount \$
30 June 2024	12 000	12 000	78 000
30 June 2025	12 000	24 000	66 000
30 June 2026	12 000	36 000	54 000

General Journal — Trenton Freightlines

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Truck	12 000	
	Accumulated		12 000
	Depreciation – Truck		
	<i>Memo 41: depreciation of the truck for the year ended 30 June 2026</i>		

Balance Sheet (extract) as at 30 June 2026

Trenton Freightlines	\$	\$
Non-Current Assets		
Truck	90 000	
Less Accumulated Depreciation – Truck	36 000	54 000

∴ at 30 June 2026 the Income Statement reports a \$12 000 depreciation expense and the Balance Sheet reports the truck at a carrying amount of \$54 000.

Practice questions — scaffolded

Question 1

Maple Grove Cabinets buys **equipment** on 1 July 2025 for **\$25 000**, estimating a **residual value of \$5 000** and a **useful life of 5 years**. It uses the straight-line method and reports to 30 June.

- Calculate the annual depreciation.
- Record the General Journal entry for depreciation for the year ended 30 June 2026.
- State the carrying amount of the equipment at 30 June 2026.

Question 2

Ridgeway Dental buys **equipment** for **\$32 000**, estimating a **residual value of \$5 000** and a **useful life of 6 years** (straight-line). The equipment has now been depreciated for **two full years** to 30 June 2026.

- Calculate the annual depreciation.
- Prepare the Income Statement extract showing the depreciation expense for the year ended 30 June 2026.
- Prepare the Balance Sheet extract (Non-Current Assets) for the equipment as at 30 June 2026.

Question 3

Southbank Cafe buys a **coffee machine** on **1 April 2026** for **\$14 000**, estimating a **residual value of \$2 000** and a **useful life of 5 years** (straight-line). The business reports to 30 June.

- Calculate the annual (full-year) depreciation.
- Calculate the depreciation to be recorded for the year ended 30 June 2026.
- State the carrying amount of the coffee machine at 30 June 2026.

Question 4

Kingsley Joinery is deciding how to depreciate a **machine** that cost **\$40 000** with a **useful life of 5 years** (straight-line). It is unsure whether to estimate the residual value at **\$5 000** or at **\$10 000**.

- Calculate the annual depreciation under each residual-value estimate.
- State which estimate produces the higher net profit in the first year, and by how much.
- Explain in one sentence why a higher residual-value estimate lowers the depreciation expense.

Question 5

Brookvale Signs owns a **vehicle** that cost **\$36 000** with an estimated **residual value of \$6 000** (straight-line). It is unsure whether the useful life is **5 years** or **6 years**.

- Calculate the annual depreciation under each useful-life estimate.
- State the carrying amount after two years under each estimate.
- Explain in one sentence why a longer useful-life estimate lowers the annual depreciation.

Question 6

Ellison Earthworks buys an **excavator** for **\$80 000**, estimating a **residual value of \$20 000** and a **useful life of 5 years** (straight-line).

- Prepare a depreciation schedule for the first three years, showing the depreciation expense, accumulated depreciation and carrying amount for each year.
- State the carrying amount of the excavator at the end of year 3.
- Explain in one sentence why the carrying amount is unlikely to equal the amount for which the excavator could be sold.

Practice questions — unscaffolded

Question 7

Nortons Bakery buys an **oven** on 1 July 2025 for **\$28 000**, estimating a **residual value of \$4 000** and a **useful life of 6 years** (straight-line, reporting to 30 June). Record the General Journal entry for depreciation for the year ended 30 June 2026, and prepare the Income Statement extract and the Balance Sheet (Non-Current Assets) extract for the oven at that date.

Question 8

Vantage Fitness buys **gym equipment** on **1 December 2025** for **\$22 000**, estimating a **residual value of \$4 000** and a **useful life of 6 years** (straight-line, reporting to 30 June). Record the General Journal entry for depreciation for the year ended 30 June 2026 and state the carrying amount of the equipment at that date.

Question 9

Delmar Consulting installs an **office fit-out** on **1 April 2025** for **\$33 000**, estimating a **residual value of \$3 000** and a **useful life of 10 years** (straight-line). The business reports to 30 June. Calculate the depreciation for the year ended 30 June 2025 and for the year ended 30 June 2026, and state the carrying amount of the fit-out at 30 June 2026.

Question 10

Firm P and Firm Q each buy an **identical machine** for **\$50 000** with a **useful life of 5 years** (straight-line). Firm P estimates the residual value at \$5 000; Firm Q estimates it at \$10 000. Calculate each firm's annual depreciation, and state which firm reports the higher net profit on this machine, and by how much, in a full year.

Question 11

Cardinia Transport owns a **trailer** that cost **\$27 000** with an estimated **residual value of \$3 000** (straight-line). Compare a **useful life of 4 years** with a **useful life of 6 years**: calculate the annual depreciation under each estimate and the carrying amount of the trailer after three years under each estimate.

Question 12

Waratah Winery buys a **bottling machine** for **\$72 000**, estimating a **residual value of \$12 000** and a **useful life of 5 years** (straight-line). Prepare a depreciation schedule for the first four years (depreciation expense, accumulated depreciation and carrying amount) and state the carrying amount at the end of year 4.

Question 13

At 30 June 2026 Highpoint Medical's records show two non-current assets: **equipment** that cost \$40 000 with accumulated depreciation of \$16 000, and a **motor vehicle** that cost \$35 000 with accumulated depreciation of \$14 000. Prepare the **Non-Current Assets** section of the Balance Sheet as at 30 June 2026, showing each asset at its carrying amount, and state the total non-current assets.

Question 14

Oakridge Plumbing owns a **van** that cost **\$46 000**, with an estimated **residual value of \$10 000** and a **useful life of 6 years** (straight-line). Calculate the annual depreciation and the carrying amount of the van at the end of year 4.

Question 15

Stanmore Bakehouse depreciates a **machine** that cost **\$34 000** with a **useful life of 5 years** by **\$6 000 per year** using the straight-line method. Calculate the estimated residual value the business must have used, and state the carrying amount of the machine at the end of year 2.

Question 16

Meridian Logistics has a delivery fleet that cost **\$120 000** with an estimated residual value of \$20 000 and a useful life of **5 years** (straight-line). A bank loan requires the business to report a minimum net profit each year. Shortly before balance day — with profit likely to fall just short — the owner instructs the accountant to change the estimated useful life of the fleet to **8 years**, which would cut the annual depreciation from \$20 000 to \$12 500 and lift reported profit by \$7 500. **Discuss** the ethical considerations raised by the owner's instruction, referring to a relevant qualitative characteristic.

Question 17

Explain why the **carrying amount** of a non-current asset reported in the Balance Sheet is unlikely to equal the amount for which the asset could be sold, and identify the qualitative characteristic (or assumption) that best justifies reporting depreciation as an expense in **each** period rather than only when the asset is eventually sold.

Question 18

Brightwater Marine buys a **workboat** on **1 October 2025** for **\$96 000**, estimating a **residual value of \$16 000** and a **useful life of 8 years** (straight-line). The business reports to 30 June. Record the General Journal entry for depreciation for the year ended 30 June 2026 and for the year ended 30 June 2027, and prepare the Balance Sheet (Non-Current Assets) extract for the workboat as at 30 June 2027.

Answers

1.
 - a. \$4 000 c. \$21 000
2.
 - a. \$4 500 c. Carrying amount \$23 000 (expense \$4 500)
3.
 - a. \$2 400 b. \$600 c. \$13 400
4.
 - a. \$7 000 (residual \$5 000) / \$6 000 (residual \$10 000) b. The \$10 000-residual estimate, by \$1 000
5.
 - a. \$6 000 (5-year life) / \$5 000 (6-year life) b. \$24 000 / \$26 000
6.
 - b. \$44 000
7. Depreciation \$4 000; carrying amount \$24 000
8. Part-year depreciation \$1 750; carrying amount \$20 250
9. Year ended 30 June 2025 \$750; year ended 30 June 2026 \$3 000; carrying amount \$29 250
10. Firm P \$9 000; Firm Q \$8 000; Firm Q higher net profit by \$1 000
11. 4-year life \$6 000 (carrying amount \$9 000); 6-year life \$4 000 (carrying amount \$15 000)
12. \$12 000 per year; carrying amount at end of year 4 \$24 000
13. Equipment \$24 000; motor vehicle \$21 000; total non-current assets \$45 000
14. Depreciation \$6 000; carrying amount \$22 000
15. Residual value \$4 000; carrying amount after two years \$22 000
16. See solutions (ethics discussion)
17. See solutions
18. Year ended 30 June 2026 \$7 500; year ended 30 June 2027 \$10 000; carrying amount \$78 500

Fully-worked solutions

Question 1

- a. Annual depreciation = $(\$25\,000 - \$5\,000) \div 5 = \$20\,000 \div 5 = \mathbf{\$4\,000}$.
- b. The equipment was held for the full year, so a full \$4 000 is charged:

General Journal — Maple Grove Cabinets

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Equipment	4 000	
	Accumulated Depreciation – Equipment		4 000
	<i>Memo: depreciation of equipment for the year ended 30 June 2026</i>		

- c. Carrying amount = $\$25\,000 - \$4\,000 = \mathbf{\$21\,000}$.

Question 2

- a. Annual depreciation = $(\$32\,000 - \$5\,000) \div 6 = \$27\,000 \div 6 = \mathbf{\$4\,500}$.
- b. Only the current year's charge is reported as the expense:

Income Statement (extract) for the year ended 30 June 2026

Ridgeway Dental	\$	\$
Less Other Expenses		

Ridgeway Dental	\$	\$
Depreciation – Equipment	4 500	

- c. After two full years the accumulated depreciation is $2 \times \$4\,500 = \$9\,000$, so the carrying amount is $\$32\,000 - \$9\,000 = \mathbf{\$23\,000}$:

Balance Sheet (extract) as at 30 June 2026

Ridgeway Dental	\$	\$
Non-Current Assets		
Equipment	32 000	
Less Accumulated Depreciation – Equipment	9 000	23 000

Question 3

- a. Annual (full-year) depreciation = $(\$14\,000 - \$2\,000) \div 5 = \$12\,000 \div 5 = \mathbf{\$2\,400}$.
- b. The machine was bought on 1 April, so it was held for 3 months (April – June): part-year depreciation = $\$2\,400 \times 3 \div 12 = \mathbf{\$600}$.
- c. Carrying amount = $\$14\,000 - \$600 = \mathbf{\$13\,400}$.

Question 4

- a. Residual \$5 000: $(\$40\,000 - \$5\,000) \div 5 = \mathbf{\$7\,000}$. Residual \$10 000: $(\$40\,000 - \$10\,000) \div 5 = \mathbf{\$6\,000}$.
- b. The **\$10 000-residual** estimate gives the smaller depreciation expense (\$6 000 vs \$7 000), so it produces the higher net profit in the first year — by **\$1 000**.
- c. A higher residual value reduces the depreciable amount (cost – residual), and it is that smaller amount that is spread over the life, so each year’s depreciation expense is lower.

Question 5

- a. 5-year life: $(\$36\,000 - \$6\,000) \div 5 = \mathbf{\$6\,000}$. 6-year life: $(\$36\,000 - \$6\,000) \div 6 = \mathbf{\$5\,000}$.
- b. After two years — 5-year life: $\$36\,000 - (2 \times \$6\,000) = \mathbf{\$24\,000}$; 6-year life: $\$36\,000 - (2 \times \$5\,000) = \mathbf{\$26\,000}$.
- c. A longer useful life spreads the same depreciable amount over more years, so the amount allocated to each year is smaller.

Question 6

- a. Annual depreciation = $(\$80\,000 - \$20\,000) \div 5 = \$60\,000 \div 5 = \$12\,000$:

Year	Depreciation expense \$	Accumulated depreciation \$	Carrying amount \$
1	12 000	12 000	68 000
2	12 000	24 000	56 000
3	12 000	36 000	44 000

- b. Carrying amount at the end of year 3 = **\$44 000**.
- c. The carrying amount is only the unexpired (not-yet-depreciated) cost, calculated from an estimated life and residual value; it is not a valuation, so it will rarely match the excavator’s actual market or selling price.

Question 7

Annual depreciation = $(\$28\,000 - \$4\,000) \div 6 = \$24\,000 \div 6 = \mathbf{\$4\,000}$ (full year):

General Journal — Nortons Bakery

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Oven	4 000	
	Accumulated Depreciation – Oven		4 000
	<i>Memo: depreciation of the oven for the year ended 30 June 2026</i>		

Income Statement (extract) for the year ended 30 June 2026

Nortons Bakery	\$	\$
Less Other Expenses		
Depreciation – Oven	4 000	

Balance Sheet (extract) as at 30 June 2026

Nortons Bakery	\$	\$
Non-Current Assets		
Oven	28 000	
Less Accumulated Depreciation – Oven	4 000	24 000

Carrying amount = **\$24 000**.

Question 8

Annual depreciation = $(\$22\,000 - \$4\,000) \div 6 = \$18\,000 \div 6 = \$3\,000$. Held from 1 December to 30 June = 7 months, so part-year depreciation = $\$3\,000 \times 7 \div 12 = \mathbf{\$1\,750}$:

General Journal — Vantage Fitness

Date 2026	Details	Debit \$	Credit \$
30 Jun	Depreciation – Gym equipment	1 750	
	Accumulated Depreciation – Gym equipment		1 750
	<i>Memo: depreciation of gym equipment for 7 months (1 December – 30 June)</i>		

Carrying amount = $\$22\,000 - \$1\,750 = \mathbf{\$20\,250}$.

Question 9

Annual (full-year) depreciation = $(\$33\,000 - \$3\,000) \div 10 = \$30\,000 \div 10 = \$3\,000$.

- **Year ended 30 June 2025:** installed 1 April, held 3 months $\rightarrow \$3\,000 \times 3 \div 12 = \mathbf{\$750}$.
- **Year ended 30 June 2026:** a full year $\rightarrow \mathbf{\$3\,000}$.

Accumulated depreciation at 30 June 2026 = $\$750 + \$3\,000 = \$3\,750$, so the carrying amount = $\$33\,000 - \$3\,750 = \mathbf{\$29\,250}$.

Question 10

Firm P: $(\$50\,000 - \$5\,000) \div 5 = \textbf{\$9\,000}$. Firm Q: $(\$50\,000 - \$10\,000) \div 5 = \textbf{\$8\,000}$. Firm Q has the smaller depreciation expense, so **Firm Q** reports the higher net profit on this machine — by **\$1 000** in a full year.

Question 11

- **4-year life:** $(\$27\,000 - \$3\,000) \div 4 = \textbf{\$6\,000}$ per year. After three years, accumulated depreciation = $3 \times \$6\,000 = \$18\,000$, so carrying amount = $\$27\,000 - \$18\,000 = \textbf{\$9\,000}$.
- **6-year life:** $(\$27\,000 - \$3\,000) \div 6 = \textbf{\$4\,000}$ per year. After three years, accumulated depreciation = $3 \times \$4\,000 = \$12\,000$, so carrying amount = $\$27\,000 - \$12\,000 = \textbf{\$15\,000}$.

The longer life gives a lower annual charge and therefore a higher carrying amount at the same date.

Question 12

Annual depreciation = $(\$72\,000 - \$12\,000) \div 5 = \$60\,000 \div 5 = \$12\,000$:

Year	Depreciation expense \$	Accumulated depreciation \$	Carrying amount \$
1	12 000	12 000	60 000
2	12 000	24 000	48 000
3	12 000	36 000	36 000
4	12 000	48 000	24 000

Carrying amount at the end of year 4 = **\$24 000**.

Question 13

Each asset is reported at cost less its accumulated depreciation: equipment $\$40\,000 - \$16\,000 = \$24\,000$; motor vehicle $\$35\,000 - \$14\,000 = \$21\,000$:

Balance Sheet (extract) as at 30 June 2026

Highpoint Medical	\$	\$
Non-Current Assets		
Equipment	40 000	
Less Accumulated Depreciation – Equipment	16 000	24 000
Motor vehicle	35 000	
Less Accumulated Depreciation – Motor vehicle	14 000	21 000
Total Non-Current Assets		45 000

Total non-current assets = **\$45 000**.

Question 14

Annual depreciation = $(\$46\,000 - \$10\,000) \div 6 = \$36\,000 \div 6 = \textbf{\$6\,000}$. After four years, accumulated depreciation = $4 \times \$6\,000 = \$24\,000$, so the carrying amount = $\$46\,000 - \$24\,000 = \textbf{\$22\,000}$.

Question 15

Straight-line depreciation = $(\text{cost} - \text{residual}) \div \text{life}$, so $\$6\,000 = (\$34\,000 - \text{residual}) \div 5$. Therefore $\$34\,000 - \text{residual} = \$6\,000 \times 5 = \$30\,000$, giving a residual value of **\$4 000**. After two years, accumulated depreciation = $2 \times \$6\,000 = \$12\,000$, so the carrying amount = $\$34\,000 - \$12\,000 = \textbf{\$22\,000}$.

Question 16

The owner's instruction is **unethical**. Useful life is an estimate that should reflect how the fleet is genuinely expected to be used; here it is being changed not because new evidence shows the trucks will last longer, but purely to **lower depreciation and inflate reported profit** so the business appears to meet the bank's loan condition. This breaches **faithful representation**: reports are meant to be **complete, free from material error and neutral (without bias)**, and a profit figure engineered to clear a loan hurdle is biased towards the owner's interest and misleads the bank that relies on it. It also undermines **comparability**, because changing the estimate makes this year's result inconsistent with prior years even though the fleet is used no differently. The accountant should refuse to alter the estimate without genuine supporting evidence; if the fleet's realistic life is 5 years, the \$20 000 charge should stand — even if that means reporting a profit below the bank's threshold. Acting honestly protects the bank, the owner (from the consequences of a misleading loan application) and the accountant's own professional integrity.

Question 17

The **carrying amount** is simply cost less accumulated depreciation — the portion of the asset's cost that has **not yet been allocated to expense**. It is calculated from **estimates** of useful life and residual value and the chosen depreciation method, not from any assessment of what the asset is worth in the market. Because market prices move with supply, demand, condition and technology — none of which the depreciation calculation considers — the carrying amount will rarely equal the amount the asset could be sold for. Depreciation is nonetheless charged in **each** period because of the **accrual basis** (an expense is recognised in the period in which the benefit of the asset is consumed, not when cash is paid or the asset is sold): allocating the cost to every period the asset helps to earn revenue gives a **faithful representation** of each period's profit and of the asset's unexpired cost, whereas recording the whole cost only on disposal would overstate profit in the years of use and understate it in the year of sale.

Question 18

Annual depreciation = $(\$96\ 000 - \$16\ 000) \div 8 = \$80\ 000 \div 8 = \$10\ 000$.

- **Year ended 30 June 2026:** bought 1 October, held 9 months $\rightarrow \$10\ 000 \times 9 \div 12 = \$7\ 500$.
- **Year ended 30 June 2027:** a full year $\rightarrow \$10\ 000$.

General Journal — Brightwater Marine

Date	Details	Debit \$	Credit \$
30 Jun 2026	Depreciation – Workboat	7 500	
	Accumulated Depreciation – Workboat		7 500
	<i>Memo: depreciation of the workboat for 9 months (1 October – 30 June)</i>		
30 Jun 2027	Depreciation – Workboat	10 000	
	Accumulated Depreciation – Workboat		10 000
	<i>Memo: depreciation of the workboat for the year ended 30 June 2027</i>		

Accumulated depreciation at 30 June 2027 = $\$7\ 500 + \$10\ 000 = \$17\ 500$, so the carrying amount = $\$96\ 000 - \$17\ 500 = \$78\ 500$:

Balance Sheet (extract) as at 30 June 2027

Brightwater Marine	\$	\$
Non-Current Assets		
Workboat	96 000	
Less Accumulated Depreciation – Workboat	17 500	78 500

Carrying amount at 30 June 2027 = **\$78 500**.

Chapter 16 Managing non-current assets — 16D A comprehensive example

Theory

An **asset** is a **present economic resource controlled by the business as a result of past events** — an economic resource being a **right that has the potential to produce future economic benefits**. A **non-current asset** is an asset the business expects to **use** in its operations for **more than one reporting period** (a number of years) and does **not** hold for resale. Vehicles, machinery, equipment, shop fittings and office furniture are typical examples. Because such an asset is bought once but helps to earn revenue over **several** years, four things must be done in turn: its **cost** must be determined, the **purchase** recorded, the cost **allocated** across its useful life through depreciation, and the asset and its depreciation **reported** each year. This section works one asset right through that lifecycle, tying together every step covered in this chapter.

Step 1 — determining the cost. A non-current asset is first recorded at its **historical cost** — the actual, verifiable amount the business sacrificed to acquire the asset and bring it to the location and condition necessary for it to be used. The cost therefore includes not only the supplier's price but **every additional outlay needed to get the asset ready for use**, such as **cartage in / delivery** and **installation, assembly, testing or modification** before the asset is put into service. Costs of **running or maintaining** the asset once it is in use — registration, insurance, fuel, repairs, or a service agreement — are **not** part of its cost; they are **period costs**, expensed as incurred, because they keep the asset operating rather than add to its capacity to earn revenue. **GST paid** on the purchase is also excluded from cost, because it is recovered through the **GST Clearing** account. Recording the asset at historical cost is supported by **verifiability** (the cost is evidenced by a source document) and **faithful representation** (the figure is **complete, free from material error** and **neutral** — without bias).

Step 2 — recording the purchase (with GST). Which book of original entry is used depends on **how the asset is paid for**, not on what is bought. An asset **paid for immediately** — by EFT, cheque or cash — is a **cash payment**, so it is recorded in the **Cash Payments Journal**, exactly as in Chapter 7: the **Bank** column takes the full GST-inclusive amount, the **GST** column takes the 10% GST paid, and the asset's **GST-exclusive cost** goes in **Sundries** against the asset account. An asset bought **on credit** is not a credit purchase of *inventory*, so the Purchases Journal cannot hold it and no other special journal fits; it is therefore recorded in the **General Journal** — **debit** the asset account with its cost, **debit GST Clearing** with the 10% GST, and **credit Accounts Payable – <supplier>** with the GST-inclusive total. Either way the GST is exactly **10% of the cost**, and the record must cross-add: in the Cash Payments Journal, **Bank = cost + GST**; in the General Journal, **total debits = total credits**.

Step 3 — calculating depreciation. **Depreciation** is the allocation of the cost of a non-current asset (less its residual value) over its **useful life**, as an expense, in the periods that benefit from using it. This applies the **accrual basis** and the **period assumption** — the cost of *using up* the asset is matched against the revenue it helps earn, period by period. Depreciation is a process of **allocation, not valuation**, and it moves **no cash**: the cash outflow happens once, when the asset is bought. Three figures are needed — **cost**, **residual value** (the amount expected to be recovered at the end of the asset's life) and **useful life** (the number of periods the asset will be used). The study design recognises **two methods**:

- **Straight-line** allocates an **equal** amount each year:

$$\text{Straight-line depreciation} = \frac{\text{cost} - \text{residual value}}{\text{useful life}}$$

- **Reducing balance** applies a **fixed rate** to the **carrying amount at the start of the year**, so the charge is large early and **decreases** every year:

$$\text{Reducing-balance depreciation} = \text{depreciation rate} \times \text{carrying amount}$$

Under reducing balance the residual value is **not** subtracted in the annual formula: because a fixed rate is applied to a balance that keeps shrinking, the charge falls each year and the carrying amount **never reaches zero**. The residual value remains the business's estimate of what the asset will be worth at the **end of its useful life** — depreciation is charged only across that life, and the rate is chosen so that the carrying amount is close to the residual by the time the life ends.

Selecting a method is a matter of matching the pattern of the expense to the way the asset's benefit is **consumed**: straight-line suits an asset used evenly across its life (a building, office furniture), while reducing balance suits an asset that loses more of its benefit early or is used more heavily when new (a vehicle, computer equipment). Whichever method is chosen must be applied **consistently** so that reports remain **comparable** from year to year.

Part-year depreciation. An asset is rarely bought on the first day of a reporting period. In the period of acquisition the business owns it for only **part** of the year, so it charges only that fraction of the annual amount, based on the **months held** (counting the month of acquisition as a full month):

$$\text{Part-year depreciation} = \text{annual depreciation} \times \frac{\text{months held}}{12}$$

Step 4 — recording the depreciation adjustment. Depreciation is a **balance day adjustment**: no external source document arrives to say the asset has worn a little more, so at balance day the business raises a **memo** and records the year's depreciation. No cash moves and nothing is bought or sold, so the adjustment fits **none** of the four special journals; its book of original entry is the **General Journal** — **debit Depreciation – <asset>** (an expense) and **credit Accumulated Depreciation – <asset>** (a contra-asset). There is **no GST** on this entry. The credit is made to a **separate** Accumulated Depreciation account, not to the asset, so that the asset keeps showing its **verifiable original cost** while Accumulated Depreciation builds a running total of **how much of the cost has been allocated to date**. Accumulated Depreciation is a **contra-asset** (a credit balance set against the asset), **not** a liability.

Step 5 — reporting. The two accounts appear in different reports each year:

- **Depreciation – <asset>** (the expense) is reported among the **Other Expenses** in the **Income Statement** for the period.
- The asset is reported under **Non-Current Assets** in the **Balance Sheet** at its **cost, less Accumulated Depreciation**, giving its **carrying amount** (carrying amount = cost – accumulated depreciation). The carrying amount is the part of the cost **not yet allocated** to expense; it **falls** each year from cost towards residual and is **not** an estimate of market value.

Managing the asset. Over the asset's life the business keeps an **asset register** — a record of each non-current asset's cost, location, depreciation method, rate or life, accumulated depreciation and carrying amount. The register supports **verifiability** and control: it makes physical checks possible, flags assets due for replacement, and reduces the risk of assets being lost, misused or taken for private use.

Ethical considerations. Because the cost, useful life, residual value and method are all chosen by the owner, the accounting for a non-current asset is open to manipulation, and honest choices matter. Including a **private** outlay (fuel to run the owner's own car, a period cost, or an asset for the owner's home) in the asset's cost, or **overstating** its useful life to shrink the annual depreciation, would report a higher profit and a higher carrying amount than is faithful — misleading a lender or a prospective buyer who relies on the reports. The estimates of residual value and useful life should be **reasonable and unbiased**, the method should reflect how the benefit is genuinely consumed and be applied **consistently**, and any private use of a business asset should be recorded as **drawings**. Maintaining an accurate asset register and safeguarding the assets from misuse are part of the owner's ethical and stewardship responsibility to every user of the reports.

Worked model. *Harbourline Freight* reports for the year ended 30 June. On **1 July 2025** it buys a forklift, paying by EFT. The supplier's invoice shows the forklift at \$40 000, delivery to the warehouse \$1 200 and installation and testing \$800 (all plus GST); the business also pays \$600 for the first year's insurance. The cost is \$40 000 + \$1 200 + \$800 = **\$42 000** (the \$600 insurance is a period cost, excluded), and GST is 10% × \$42 000 = **\$4 200**. The \$46 200 paid by **EFT 318** is a cash payment, so it is recorded in the **Cash Payments Journal** (only the columns this payment affects are shown):

Cash Payments Journal (extract) — Harbourline Freight (July 2025)

Date 2025	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Jul 1	Forklift	EFT 318	46 200	4 200	42 000

The **Sundries** figure (\$42 000) carries the GST-exclusive cost to the **Forklift** asset account, and the \$4 200 in the **GST** column reduces what the business owes the ATO.

With a residual value of \$6 000 and a useful life of 6 years, **straight-line** depreciation is $(\$42\,000 - \$6\,000) \div 6 = \$6\,000$ per year. Alternatively, at a **reducing-balance** rate of 20% the charge falls each year — \$8 400, then \$6 720, then \$5 376 — as the same rate is applied to a smaller carrying amount. Under straight-line, the balance day adjustment for the first year is:

General Journal

Date 2026	Details	Debit \$	Credit \$
Jun 30	Depreciation – Forklift	6 000	
	Accumulated Depreciation – Forklift		6 000
	<i>Depreciation of forklift for the year ended 30 June 2026 (Memo 42)</i>		

and the forklift is reported at a carrying amount of $\$42\,000 - \$6\,000 = \$36\,000$:

Income Statement (extract) for the year ended 30 June 2026

	\$
Other Expenses	
Depreciation – Forklift	6 000

Balance Sheet (extract) as at 30 June 2026

	\$	\$
Non-Current Assets		
Forklift (at cost)	42 000	
less Accumulated Depreciation	6 000	36 000

Worked examples (scaffolded)

Example 1 — determining cost, recording the purchase, and first-year straight-line depreciation

Kingsford Print Co reports for the year ended 30 June. On **1 July 2025** it buys a digital press, paying by EFT (EFT 415). The invoice shows the press at \$30 000, delivery \$900 and installation and testing \$1 100 (all plus GST); the business also pays \$700 for the first year's insurance on the press. The press has a residual value of \$2 000 and a useful life of 5 years, depreciated straight-line.

Working	Comment
Cost = $\$30\,000 + \$900 + \$1\,100 = \$32\,000$.	Delivery and installation are needed to get the press ready for use, so they are part of its cost.
The \$700 insurance is excluded from cost.	Insurance keeps the press running; it is a period cost (an expense), not part of the asset's cost.
GST = $10\% \times \$32\,000 = \$3\,200$; EFT (Bank) = $\$32\,000 + \$3\,200 = \$35\,200$.	The GST paid goes in the GST column of the Cash Payments Journal, not into the asset's cost.
Depreciation = $(\$32\,000 - \$2\,000) \div 5 = \$6\,000$ per year.	Straight-line spreads the depreciable amount (cost – residual) evenly over the useful life.
Carrying amount after year 1 = $\$32\,000 - \$6\,000 = \$26\,000$.	Cost less accumulated depreciation; reported in the Balance Sheet at 30 June 2026.

Cash Payments Journal (extract) — Kingsford Print Co (July 2025)

Date 2025	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Jul 1	Digital Press	EFT 415	35 200	3 200	32 000

General Journal

Date 2026	Details	Debit \$	Credit \$
Jun 30	Depreciation – Digital Press	6 000	
	Accumulated Depreciation – Digital Press		6 000
	<i>Depreciation of digital press for the year ended 30 June 2026 (Memo 9)</i>		

Balance Sheet (extract) as at 30 June 2026

	\$	\$
Non-Current Assets		
Digital Press (at cost)	32 000	
less Accumulated Depreciation	6 000	26 000

Example 2 — a reducing-balance schedule over three years, then reporting the asset

Delta Earthworks bought an excavator on 1 July 2024 for a cost of \$60 000. It depreciates the excavator by the **reducing-balance** method at **30% per annum** and reports for the year ended 30 June. Prepare a depreciation schedule for the first three years and report the excavator in the Balance Sheet as at 30 June 2027.

Working	Comment
Year 1 = $30\% \times \$60\,000 = \$18\,000$; carrying amount = $\$60\,000 - \$18\,000 = \$42\,000$.	The rate is applied to the full cost in the first year.
Year 2 = $30\% \times \$42\,000 = \$12\,600$; carrying amount = $\$42\,000 - \$12\,600 = \$29\,400$.	The same rate is applied to the <i>new</i> , smaller carrying amount.
Year 3 = $30\% \times \$29\,400 = \$8\,820$; carrying amount = $\$29\,400 - \$8\,820 = \$20\,580$.	The expense shrinks each year even though the rate is unchanged.
Accumulated depreciation at 30 June 2027 = $\$18\,000 + \$12\,600 + \$8\,820 = \$39\,420$.	The running total of cost allocated to date; deducted from cost in the Balance Sheet.

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			60 000
30 Jun 2025	18 000	18 000	42 000
30 Jun 2026	12 600	30 600	29 400
30 Jun 2027	8 820	39 420	20 580

Balance Sheet (extract) as at 30 June 2027

	\$	\$
Non-Current Assets		
Excavator (at cost)	60 000	

Balance Sheet (extract) as
at 30 June 2027

	\$	\$
less Accumulated Depreciation	39 420	20 580

Worked examples (unscaffolded)

Example 3 — part-year depreciation in the year of acquisition, then a full year

Marloo Cabinets reports for the year ended 30 June. On **1 April 2026** it buys a CNC router, paying by EFT. The invoice shows the router at \$41 000, freight \$1 500 and installation \$1 500 (all plus GST). The router has a residual value of \$4 000 and a useful life of 5 years, depreciated straight-line. Determine the cost, record the purchase, and prepare a depreciation schedule and the report extracts for the years ended 30 June 2026 and 30 June 2027.

The cost is \$41 000 + \$1 500 + \$1 500 = \$44 000, GST is 10% × \$44 000 = \$4 400, and the EFT of \$48 400 is a cash payment, recorded in the Cash Payments Journal. Straight-line depreciation is $(\$44\,000 - \$4\,000) \div 5 = \$8\,000$ per full year. The router is held from 1 April to 30 June 2026 = **3 months**, so year 1 depreciation is $\$8\,000 \times 3/12 = \$2\,000$; the year ended 30 June 2027 is a full year at \$8 000.

Cash Payments Journal (extract) — Marloo Cabinets (April 2026)

Date 2026	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Apr 1	CNC Router	EFT 224	48 400	4 400	44 000

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			44 000
30 Jun 2026	2 000	2 000	42 000
30 Jun 2027	8 000	10 000	34 000

Income Statement (extract) for the year
ended 30 June 2027

	\$
Other Expenses	
Depreciation – CNC Router	8 000

Balance Sheet (extract) as
at 30 June 2027

	\$	\$
Non-Current Assets		
CNC Router (at cost)	44 000	
less Accumulated Depreciation	10 000	34 000

∴ only 3 months' depreciation (\$2 000) is charged in the year of acquisition; a full \$8 000 falls in the next year, and the router is reported at a carrying amount of \$34 000 at 30 June 2027.

Example 4 — comparing the two methods and selecting one

Pinehill Tours is deciding how to depreciate a minibus it will buy for a cost of \$48 000, with a residual value of \$8 000 and a useful life of 4 years. Model the depreciation expense for each of the first three years under (i) the **straight-line** method and (ii) the **reducing-balance** method at 25% per annum, and advise which method better suits the minibus.

Straight-line depreciation is $(\$48\,000 - \$8\,000) \div 4 = \$10\,000$ **each** year. Reducing balance at 25% gives $25\% \times \$48\,000 = \$12\,000$ in year 1, $25\% \times \$36\,000 = \$9\,000$ in year 2, and $25\% \times \$27\,000 = \$6\,750$ in year 3.

Year	Straight-line \$	Reducing balance (25%) \$
1	10 000	12 000
2	10 000	9 000
3	10 000	6 750

Under straight-line the expense is constant; under reducing balance it is **front-loaded** — higher than straight-line in year 1 (\$12 000 vs \$10 000) and lower in years 2 and 3. A minibus loses more of its economic benefit when it is new and is driven hardest in its early years, and its repair costs tend to rise as it ages, so the reducing-balance pattern — a large charge early, tapering later — is a more **faithful representation** of how the benefit is consumed, and it produces a more even *total* expense (depreciation plus repairs) across the life.

∴ the reducing-balance method better matches the minibus's pattern of use, provided it is then applied **consistently** so that the reports stay comparable from year to year.

Practice questions — scaffolded

Question 1

Oakridge Dairy reports for the year ended 30 June. On **1 July 2025** it buys a refrigerated milk tank, paying by EFT (EFT 501). The invoice shows the tank at \$18 000, delivery \$600 and installation \$400 (all plus GST); the business also pays \$500 for a first-year servicing contract. The tank has a residual value of \$2 000 and a useful life of 4 years, depreciated straight-line.

- Calculate the cost of the milk tank.
- Record the payment for the tank in the Cash Payments Journal.
- Calculate the straight-line depreciation per year.

Question 2

Ferngully Rentals bought equipment on 1 July 2024 for a cost of \$25 000. It depreciates the equipment by the **reducing-balance** method at **20% per annum** and reports for the year ended 30 June.

- Prepare a depreciation schedule for the first three years.
- State the carrying amount of the equipment at the end of year 3.
- State the depreciation expense recorded in year 2.

Question 3

Brightway Signs bought a laser cutter on 1 July 2024 for a cost of \$28 000, with a residual value of \$4 000 and a useful life of 6 years, depreciated straight-line. It reports for the year ended 30 June.

- Record the depreciation balance day adjustment for the year ended 30 June 2025 in the General Journal.
- Prepare the Balance Sheet extract for the laser cutter as at 30 June 2026.
- State the depreciation reported in the Income Statement for the year ended 30 June 2026.

Question 4

Cove Marine reports for the year ended 30 June. On **1 October 2025** it buys a boat hoist for a cost of \$36 000, with a residual value of \$6 000 and a useful life of 5 years, depreciated straight-line.

- Calculate the depreciation for a full year.
- Calculate the depreciation for the year ended 30 June 2026.
- State the carrying amount of the hoist at 30 June 2026.

Question 5

Highvale Clinic reports for the year ended 30 June. On **1 July 2025** it buys diagnostic equipment **on credit** from *MedSupply*. The invoice shows the equipment at \$22 000 and installation \$2 000 (both plus GST). The equipment has a residual value of \$4 000 and a useful life of 5 years, depreciated straight-line.

- Calculate the cost of the equipment.
- Record the purchase of the equipment in the General Journal.
- Calculate the straight-line depreciation per year.

Question 6

Summit Gym is deciding how to depreciate treadmills it will buy for a cost of \$20 000, with a residual value of \$2 000 and a useful life of 5 years. It is comparing the straight-line method with the reducing-balance method at 30% per annum.

- Calculate the straight-line depreciation in year 1.
- Calculate the reducing-balance depreciation in year 1.
- State which method reports the lower net profit in year 1, and by how much.

Practice questions — unscaffolded

Question 7

Rosewood Joinery reports for the year ended 30 June. On **1 July 2024** it buys a panel saw, paying by EFT (EFT 610). The invoice shows the saw at \$34 000, cartage \$800 and installation \$1 200 (all plus GST); the business also pays \$900 for the first year's insurance. The saw has a residual value of \$6 000 and a useful life of 5 years, depreciated straight-line. Determine the cost, record the purchase, prepare a depreciation schedule for the first three years, and prepare the Balance Sheet extract for the saw as at 30 June 2026.

Question 8

Tarnook Haulage bought a prime mover on 1 July 2024 for a cost of \$120 000. It depreciates the prime mover by the **reducing-balance** method at **25% per annum** and reports for the year ended 30 June. Prepare a depreciation schedule for the first three years and prepare the Balance Sheet extract for the prime mover as at 30 June 2027.

Question 9

Elmwood Café reports for the year ended 30 June. On **1 January 2026** it buys an espresso machine for a cost of \$24 000, with a residual value of \$4 000 and a useful life of 4 years, depreciated straight-line. Prepare a depreciation schedule covering every reporting period until the machine is fully depreciated, and state the depreciation charged in the first period and the final carrying amount.

Question 10

Bayfield Logistics reports for the year ended 30 June. On **1 April 2025** it buys a forklift for a cost of \$40 000. It depreciates the forklift by the **reducing-balance** method at **20% per annum**. Prepare a depreciation schedule for the years ended 30 June 2025, 2026 and 2027, and state the carrying amount at 30 June 2027.

Question 11

Grange Medical reports for the year ended 30 June. On **1 July 2025** it buys an X-ray unit **on credit** from *Radix Ltd*. The invoice shows the unit at \$50 000 and installation \$6 000 (both plus GST). The unit has a residual value of \$8 000 and a useful life of 6 years, depreciated straight-line. Determine the cost, record the purchase, and state the carrying amount of the unit at 30 June 2026 and at 30 June 2027.

Question 12

Whitfield Farms buys a tractor, paying by EFT. It pays: the supplier's invoice price \$72 000, delivery \$2 000, pre-use fitting of a front loader \$3 000, first-year registration \$800, first-year insurance \$1 200, and \$200 of fuel to drive the

tractor back from the dealer (all amounts plus GST where applicable). Calculate the cost of the tractor, and record the payment for the tractor (that payment only) in the Cash Payments Journal.

Question 13

Lindale Bakery bought an oven on 1 July 2023 for a cost of \$30 000, with a residual value of \$3 000 and a useful life of 9 years, depreciated straight-line. It reports for the year ended 30 June. State the annual depreciation, and prepare the Balance Sheet extract for the oven as at 30 June 2026.

Question 14

A machine owned by *Delford Plastics* is reported in the Balance Sheet as at 30 June 2026 at a cost of \$45 000 less accumulated depreciation of \$27 000. The machine was bought on 1 July and has been depreciated by the straight-line method at \$4 500 per year ever since. Calculate: (a) the number of years the machine has been depreciated; (b) its carrying amount at 30 June 2026; and (c) the residual value used, if the useful life is 9 years.

Question 15

Norwood Freight is deciding how to depreciate a truck it will buy for a cost of \$80 000, with a residual value of \$10 000 and a useful life of 5 years. Model the total depreciation charged over the first three years, and the carrying amount at the end of year 3, under (i) the straight-line method and (ii) the reducing-balance method at 30% per annum. State how much more depreciation reducing balance charges over the three years, and discuss one implication for the profit reported in those years.

Question 16

A delivery van loses most of its economic benefit in its first two years and needs increasing repairs as it ages. Explain, with reference to a relevant qualitative characteristic, which depreciation method gives a more faithful representation of the van's use, and justify your choice.

Question 17

Explain why a non-current asset is reported in the Balance Sheet at its **cost less accumulated depreciation** — showing both figures — rather than at a single carrying-amount figure or at the amount the asset could be sold for. Refer to at least one relevant qualitative characteristic.

Question 18

The owner of *Cedarbrook Landscaping* is about to apply for a bank loan and wants the business's reports to look as strong as possible. Shortly before balance day the owner asks you to (i) extend the estimated useful life of recently purchased machinery from 5 years to 10 years, halving the annual depreciation, and (ii) record a ride-on mower bought for the owner's own home as a business non-current asset. Discuss the ethical considerations raised, referring to relevant qualitative characteristics and to the effect on the users of the reports.

Answers

1.
 - a. \$19 000 c. \$4 250 per year
2.
 - b. \$12 800 c. \$4 000
3.
 - b. Carrying amount \$20 000 (cost \$28 000 – accumulated depreciation \$8 000) c. \$4 000
4.
 - a. \$6 000 b. \$4 500 c. \$31 500
5.
 - a. \$24 000 c. \$4 000 per year
6.
 - a. \$3 600 b. \$6 000 c. Reducing balance, by \$2 400
7. Cost \$36 000; depreciation \$6 000 per year; carrying amount at 30 June 2026 = \$24 000
8. Year 3 depreciation \$16 875; accumulated depreciation \$69 375; carrying amount \$50 625
9. First period \$2 500; final carrying amount \$4 000 (over 5 reporting periods)
10. Depreciation \$2 000, \$7 600, \$6 080; carrying amount at 30 June 2027 = \$24 320
11. Cost \$56 000; carrying amount \$48 000 (30 Jun 2026) and \$40 000 (30 Jun 2027)
12. Cost \$77 000; GST \$7 700; Bank \$84 700
13. \$3 000 per year; carrying amount at 30 June 2026 = \$21 000
14.
 - a. 6 years b. \$18 000 c. \$4 500
15. Straight-line total \$42 000 (carrying amount \$38 000); reducing balance total \$52 560 (carrying amount \$27 440); reducing balance charges \$10 560 more
16. See solutions
17. See solutions
18. See solutions

Fully-worked solutions

Question 1

- a. Cost = \$18 000 + \$600 + \$400 = **\$19 000** (the \$500 servicing contract is a period cost, excluded).
- b. GST = 10% × \$19 000 = \$1 900; EFT (Bank) = \$19 000 + \$1 900 = \$20 900. Paying by EFT is a cash payment, so the milk tank goes in the **Cash Payments Journal**: \$19 000 (the GST-exclusive cost) in Sundries against the asset account, \$1 900 in the GST column, \$20 900 in Bank.

Cash Payments Journal (extract) — Oakridge Dairy (July 2025)

Date 2025	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Jul 1	Milk Tank	EFT 501	20 900	1 900	19 000

- c. Depreciation = (\$19 000 – \$2 000) ÷ 4 = \$17 000 ÷ 4 = **\$4 250 per year**.

Question 2

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			25 000
30 Jun 2025	5 000	5 000	20 000
30 Jun 2026	4 000	9 000	16 000
30 Jun 2027	3 200	12 200	12 800

Year 1 = $20\% \times \$25\,000 = \$5\,000$; year 2 = $20\% \times \$20\,000 = \$4\,000$; year 3 = $20\% \times \$16\,000 = \$3\,200$.

b. Carrying amount at the end of year 3 = **\$12 800**.

c. Depreciation in year 2 = **\$4 000**.

Question 3

Straight-line depreciation = $(\$28\,000 - \$4\,000) \div 6 = \$4\,000$ per year.

General Journal

Date 2025	Details	Debit \$	Credit \$
Jun 30	Depreciation – Laser Cutter	4 000	
	Accumulated Depreciation – Laser Cutter		4 000
	<i>Depreciation of laser cutter for the year ended 30 June 2025 (Memo 27)</i>		

b. By 30 June 2026 two years' depreciation has accumulated ($\$4\,000 + \$4\,000 = \$8\,000$):

Balance Sheet (extract) as at 30 June 2026

	\$	\$
Non-Current Assets		
Laser Cutter (at cost)	28 000	
less Accumulated Depreciation	8 000	20 000

c. Depreciation reported in the Income Statement for the year ended 30 June 2026 = **\$4 000** (each year's expense is the same under straight-line).

Question 4

a. Depreciation for a full year = $(\$36\,000 - \$6\,000) \div 5 = \$6\,000$.

b. The hoist is held from 1 October 2025 to 30 June 2026 = **9 months**, so depreciation for the year ended 30 June 2026 = $\$6\,000 \times 9/12 = \$4\,500$.

c. Carrying amount at 30 June 2026 = $\$36\,000 - \$4\,500 = \$31\,500$.

Question 5

a. Cost = $\$22\,000 + \$2\,000 = \$24\,000$ (installation is part of getting the equipment ready for use).

b. GST = $10\% \times \$24\,000 = \$2\,400$; the total owed on credit = $\$24\,000 + \$2\,400 = \$26\,400$.

General Journal

Date 2025	Details	Debit \$	Credit \$
Jul 1	Diagnostic Equipment	24 000	
	GST Clearing	2 400	
	Accounts Payable – MedSupply		26 400
	<i>Purchase of diagnostic equipment on credit; Invoice M92</i>		

c. Depreciation = $(\$24\,000 - \$4\,000) \div 5 = \$4\,000$ per year.

Question 6

- Straight-line depreciation in year 1 = $(\$20\,000 - \$2\,000) \div 5 = \$3\,600$.
- Reducing-balance depreciation in year 1 = $30\% \times \$20\,000 = \$6\,000$.
- Reducing balance charges the larger expense in year 1 (\$6 000 vs \$3 600), so it reports the **lower** net profit — by $\$6\,000 - \$3\,600 = \$2\,400$.

Question 7

Cost = $\$34\,000 + \$800 + \$1\,200 = \$36\,000$ (the \$900 insurance is a period cost, excluded). GST = $10\% \times \$36\,000 = \$3\,600$; EFT (Bank) = \$39 600. Straight-line depreciation = $(\$36\,000 - \$6\,000) \div 5 = \$6\,000$ per year.

Cash Payments Journal (extract) — Rosewood Joinery (July 2024)

Date 2024	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Jul 1	Panel Saw	EFT 610	39 600	3 600	36 000

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			36 000
30 Jun 2025	6 000	6 000	30 000
30 Jun 2026	6 000	12 000	24 000
30 Jun 2027	6 000	18 000	18 000

Balance Sheet (extract) as
at 30 June 2026

Non-Current Assets

Panel Saw (at cost)	36 000	
less Accumulated Depreciation	12 000	24 000

∴ the saw is reported at a carrying amount of \$24 000 at 30 June 2026.

Question 8

Reducing balance at 25%: year 1 = $25\% \times \$120\,000 = \$30\,000$; year 2 = $25\% \times \$90\,000 = \$22\,500$; year 3 = $25\% \times \$67\,500 = \$16\,875$.

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			120 000
30 Jun 2025	30 000	30 000	90 000
30 Jun 2026	22 500	52 500	67 500
30 Jun 2027	16 875	69 375	50 625

Balance Sheet (extract) as
at 30 June 2027

Non-Current Assets

Prime Mover (at cost)	120 000	
less Accumulated	69 375	50 625

Balance Sheet (extract) as
at 30 June 2027

\$

\$

Depreciation

Question 9

Straight-line depreciation = $(\$24\,000 - \$4\,000) \div 4 = \$5\,000$ per full year. Bought on 1 January 2026, the machine is held 6 months to 30 June 2026, so the first period is charged $\$5\,000 \times 6/12 = \$2\,500$; three full years each carry \$5 000; a final 6-month period carries \$2 500, completing the 4-year life across five reporting periods.

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			24 000
30 Jun 2026	2 500	2 500	21 500
30 Jun 2027	5 000	7 500	16 500
30 Jun 2028	5 000	12 500	11 500
30 Jun 2029	5 000	17 500	6 500
30 Jun 2030	2 500	20 000	4 000

The first period charges **\$2 500**, and the final carrying amount equals the residual value of **\$4 000**; the \$20 000 depreciable amount is spread across five reporting periods (2 500 + 5 000 + 5 000 + 5 000 + 2 500).

Question 10

Reducing balance at 20%. The forklift is bought on 1 April 2025, so the first period (to 30 June 2025) is a part-year: full-year charge $20\% \times \$40\,000 = \$8\,000$, held 3 months, so $\$8\,000 \times 3/12 = \$2\,000$. Each later full year applies 20% to the carrying amount brought forward.

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			40 000
30 Jun 2025	2 000	2 000	38 000
30 Jun 2026	7 600	9 600	30 400
30 Jun 2027	6 080	15 680	24 320

Year 2 = $20\% \times \$38\,000 = \$7\,600$; year 3 = $20\% \times \$30\,400 = \$6\,080$. Carrying amount at 30 June 2027 = **\$24 320**.

Question 11

Cost = $\$50\,000 + \$6\,000 = \$56\,000$. GST = $10\% \times \$56\,000 = \$5\,600$; the total owed on credit = \$61 600. Straight-line depreciation = $(\$56\,000 - \$8\,000) \div 6 = \$8\,000$ per year.

General Journal

Date 2025	Details	Debit \$	Credit \$
Jul 1	X-ray Unit	56 000	
	GST Clearing	5 600	
	Accounts Payable		61 600
	– Radix Ltd		
	<i>Purchase of X-ray</i>		
	<i>unit on credit;</i>		
	<i>Invoice R310</i>		

Carrying amount at 30 June 2026 = $\$56\,000 - \$8\,000 = \mathbf{\$48\,000}$; at 30 June 2027 = $\$56\,000 - \$16\,000 = \mathbf{\$40\,000}$.

Question 12

Cost = invoice \$72 000 + delivery \$2 000 + pre-use fitting \$3 000 = **\$77 000**. Registration \$800, insurance \$1 200 and fuel \$200 are period costs of running the tractor, so they are **excluded** from its cost. GST on the asset = $10\% \times \$77\,000 = \$7\,700$; EFT (Bank) = $\$77\,000 + \$7\,700 = \$84\,700$. The registration, insurance and fuel are separate payments, each recorded on its own line of the journal as an expense; only the tractor payment is shown here.

Cash Payments Journal (extract) — Whitfield Farms

Date	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Jul 1	Tractor	EFT 733	84 700	7 700	77 000

Question 13

Straight-line depreciation = $(\$30\,000 - \$3\,000) \div 9 = \textbf{\$3 000 per year}$. By 30 June 2026 three years have been charged (30 June 2024, 2025, 2026), so accumulated depreciation = $3 \times \$3\,000 = \$9\,000$.

Balance Sheet (extract) as
at 30 June 2026

\$ \$

Non-Current Assets

Oven (at cost)	30 000	
less Accumulated Depreciation	9 000	21 000

Question 14

- Number of years depreciated = accumulated depreciation $\div$ annual depreciation = $\$27\,000 \div \$4\,500 = \textbf{6 years}$.
- Carrying amount = cost – accumulated depreciation = $\$45\,000 - \$27\,000 = \textbf{\$18 000}$.
- Over a 9-year life the total depreciation (the depreciable amount) = $9 \times \$4\,500 = \$40\,500$, so the residual value = cost – depreciable amount = $\$45\,000 - \$40\,500 = \textbf{\$4 500}$.

Question 15

Straight-line depreciation = $(\$80\,000 - \$10\,000) \div 5 = \$14\,000$ per year, so over three years = $3 \times \$14\,000 = \textbf{\$42 000}$, and the carrying amount at the end of year 3 = $\$80\,000 - \$42\,000 = \textbf{\$38 000}$.

Reducing balance at 30%: year 1 = $30\% \times \$80\,000 = \$24\,000$; year 2 = $30\% \times \$56\,000 = \$16\,800$; year 3 = $30\% \times \$39\,200 = \$11\,760$. Total over three years = $\$24\,000 + \$16\,800 + \$11\,760 = \textbf{\$52 560}$, and the carrying amount at the end of year 3 = $\$80\,000 - \$52\,560 = \textbf{\$27 440}$.

Year ended	Straight-line depreciation \$	Reducing-balance depreciation \$
1	14 000	24 000
2	14 000	16 800
3	14 000	11 760
Total	42 000	52 560

Reducing balance charges $\$52\,560 - \$42\,000 = \textbf{\$10 560 more}$ depreciation over the first three years. One implication is that reducing balance reports a **lower net profit** in these early years (because the expense is higher) and a **lower carrying amount** for the truck, while in the later years of the truck's life the position reverses — reducing balance will charge less than straight-line and report a higher profit. The choice of method therefore changes the *timing* of the depreciation charged; and because a fixed rate applied to a shrinking balance never writes the truck all the way down to its residual value, it also changes the **total** charged across the truck's useful life. That is why the method chosen must be applied **consistently** and disclosed, if the reports are to remain **comparable** from year to year.

Question 16

The **reducing-balance** method gives the more faithful representation. Depreciation should allocate the asset's cost in a pattern that reflects how its **economic benefit is consumed**. This van loses most of its benefit in its first two years, so a method that records a **high** expense early and **smaller** expenses later — reducing balance — matches the expense to the benefit used up in each period far better than the even, straight-line charge would. This supports **faithful representation** (and the **accrual basis**), because each period's profit then carries a depreciation expense that genuinely corresponds to the van's use that year. It also produces a more even *total* vehicle expense over time: the depreciation charge falls as the van ages just as its repair costs rise, so the two together stay steadier than they would under straight-line. For these reasons reducing balance is the justified choice for this van.

Question 17

Reporting the asset at **cost less accumulated depreciation**, with both figures shown, tells users far more than a single net figure and keeps the report grounded in verifiable evidence. The **cost** is the historical cost supported by the purchase source document, so it is **verifiable** — an independent person could check the figure against that document — and showing it unchanged year after year preserves that verifiability. The **accumulated depreciation** shows how much of that cost has already been allocated to expense, which lets a user judge how much of the asset's benefit remains and roughly how far through its life it is — information that is **relevant** to decisions such as whether the asset will soon need replacing. The resulting **carrying amount** is simply the portion of the asset's cost **not yet allocated** to expense; it is **not** an estimate of what the asset could be sold for, because depreciation is a process of **cost allocation**, **not valuation**, and market value is a different (and often subjective) measure. Reporting a "sale value" instead would replace a verifiable historical cost with an unverifiable estimate and undermine the **faithful representation** of the asset.

Question 18

Both requests would make the reports misleading and breach the owner's ethical responsibility to their users. Extending the useful life from 5 to 10 years only to **halve** the depreciation is not a genuine re-estimate based on how long the machinery will really be used; it is chosen to inflate profit and the carrying amount just before a loan application. A useful-life estimate must be **reasonable and unbiased**, so a change made to flatter the figures is **not a faithful representation** — the depreciation and carrying amount reported would be neither **neutral** (they are deliberately biased in the owner's favour) nor **free from material error** — and it damages **comparability** with earlier years. Recording the owner's **private** ride-on mower as a business asset is worse still: the mower is not controlled by the business or used to earn its revenue, so treating it as a business non-current asset **overstates assets** and, because the payment was really for the owner's benefit, it should be recorded as **drawings**, not capitalised. The users who would be harmed are clear — the **bank**, which would lend against an overstated profit and asset base and so misjudge the risk, and the owner themselves, who would be making decisions on figures that are not true. Under the **entity assumption**, only the business's own transactions belong in its reports; the accountant should refuse both requests, record depreciation on a genuine estimate of useful life, and treat the mower as drawings, keeping the reports a faithful and verifiable representation of the business. Maintaining an accurate **asset register** helps here, because it documents which assets genuinely belong to the business and how each is being depreciated.

Chapter 16 Managing non-current assets — 16E Financial indicators and non-current assets

Theory

A business commits a great deal of money to its **non-current assets** — the vehicles, equipment, fittings, machinery and premises it expects to use for **more than the next 12 months**. In most trading and service businesses these non-current assets are the **largest single block of the money invested**. Having bought them, the owner needs to know one thing above all: are those assets being **used effectively** to generate sales and to earn profit? A dollar figure alone cannot answer that — a large business will make more sales and more profit than a small one simply because it owns more. To judge how **productively** and how **profitably** a business uses the resources it controls, two **financial indicators** relate the results of the year (sales, profit) back to the **assets** that produced them: the **Asset Turnover** and the **Return on Assets**.

Why “average” total assets. Both indicators divide by the business’s **average total assets** for the period. Sales and profit are earned **across the whole year**, but the asset figure in a Balance Sheet is a snapshot taken on **one day**. The pool of assets usually changes during the year — the business buys new equipment, disposes of old vehicles, and its bank balance and inventory rise and fall. Matching a full year’s sales or profit against the assets held on the **closing day only** would be misleading if the business grew or shrank its assets during the year. The fair comparison is against the **average** stock of assets held over the period:

$$\text{Average total assets} = \frac{\text{total assets (opening)} + \text{total assets (closing)}}{2}$$

where **total assets (opening)** is the figure at the *start* of the period (the previous Balance Sheet) and **total assets (closing)** is the figure at the *end*.

Asset Turnover. The **Asset Turnover** measures how **productively** a business has used its assets to generate **sales revenue** — how many dollars of net sales it squeezes out of every dollar invested in assets:

$$\text{Asset Turnover} = \text{net sales} \div \text{average total assets}$$

It is expressed as a number of **times** (conventionally to one decimal place). An Asset Turnover of **2.0 times** means the business generated **\$2.00 of net sales for every \$1.00 of average assets**. The *higher* the Asset Turnover, the harder each dollar of assets is working to produce sales. Because non-current assets are usually the biggest part of total assets, a low or falling Asset Turnover often points to non-current assets that are **under-used** — idle machinery, a delivery vehicle that sits in the yard, retail space that is not busy — while a high Asset Turnover suggests the non-current assets are being kept **busy**.

Return on Assets. The **Return on Assets (ROA)** measures how **profitably** a business has used its assets — how many cents of **net profit** it earns from every dollar invested in assets:

$$\text{Return on Assets} = (\text{net profit} \div \text{average total assets}) \times 100$$

It is expressed as a **percentage** (conventionally to one decimal place). A Return on Assets of **15.0%** means the business earned **15 cents of net profit for every \$1.00 of average assets** it controlled. Return on Assets is the broadest measure of how well the business has used **everything it controls** to make a profit, so it is the indicator an owner watches when deciding whether the money tied up in non-current assets is **earning its keep**.

The non-current-asset link. Both indicators are calculated on **total** assets, not on non-current assets alone. They belong in a chapter on *managing non-current assets* because, for most businesses, **non-current assets make up the greatest share of total assets** — so a decision about non-current assets moves these indicators more than anything else. Buying new equipment, replacing an ageing vehicle, disposing of an under-used machine, or simply charging another year’s depreciation on the assets already held, all change the asset base, and the effect shows up immediately in the Asset Turnover and the Return on Assets.

Worked model. Harborline Traders is a trading business. For the year ended 30 June 2026 it reported **net sales of \$800 000** and a **net profit of \$60 000**. Its **total assets were \$380 000** at 1 July 2025 and **\$420 000** at 30 June 2026. The closing total of \$420 000 is made up of **current assets \$120 000** and **non-current assets \$300 000** — so the non-

current assets are **71.4%** of every dollar of assets the business controls. Average total assets and the two indicators are:

Harborline Traders — year ended 30 June 2026	Figure
Net sales	\$800 000
Net profit	\$60 000
Total assets (opening, 1 Jul 2025)	\$380 000
Total assets (closing, 30 Jun 2026)	\$420 000
Average total assets = $(\$380\,000 + \$420\,000) \div 2$	\$400 000
Asset Turnover = $\$800\,000 \div \$400\,000$	2.0 times
Return on Assets = $(\$60\,000 \div \$400\,000) \times 100$	15.0%

Harborline generated **\$2.00 of sales** and earned **15 cents of net profit** for every dollar of average assets. Because non-current assets are nearly three-quarters of those assets, both figures are largely a verdict on how well Harborline is using its **vehicles, fittings and equipment**.

Reading the two indicators together. The indicators are most useful when **compared** — with the same business in an earlier period, with its budget, or with a similar business — and they are most revealing when read **side by side**, because each answers a different question:

- If the **Asset Turnover rises but the Return on Assets falls**, the assets are generating **more sales yet less profit per dollar** — the extra sales are being made at a squeezed margin, or the new assets bring higher running costs (depreciation, interest, fuel).
- If the **Asset Turnover falls but the Return on Assets rises**, the business is making **fewer sales per asset dollar** yet keeping **more profit** — often the sign of shedding an under-used non-current asset or lifting selling prices.
- If **both fall after a large asset purchase**, newly bought non-current assets have enlarged the asset base **before** they have had time to generate their full sales and profit — a common, and often temporary, result of investing in new equipment or premises.

A single figure is never “good” or “bad” until it is compared, and comparisons must be made between **like and like** (the qualitative characteristic of **comparability**): a business’s indicators should be judged against its own past, its budget, or a business of a similar type and size, not against a business with a completely different asset structure.

Non-financial information about non-current assets. The two indicators are **financial** information — they are built entirely from dollar figures. On their own they tell the owner *that* asset use has changed but not *why*. To interpret them, and to make good decisions about non-current assets, the owner also needs **non-financial information** — relevant information that is **not expressed in dollars**. For non-current assets this includes:

- the **age and physical condition** of vehicles, machinery and fittings;
- how **intensively** each asset is used — its **capacity utilisation**, operating hours or idle time;
- the **frequency of breakdowns** and the resulting **downtime**;
- whether the asset’s **technology is current** or has been overtaken by newer, more efficient models;
- the **skill and training** of the employees who operate the asset, and its **safety** record;
- the asset’s **energy efficiency and environmental impact**; and
- **customer satisfaction** with the goods or service the asset produces.

Non-financial information **explains** the indicators — a falling Asset Turnover makes sense once you learn the main machine is ten years old and breaks down often — and it **informs asset-management decisions** a ratio cannot make on its own, such as whether to repair or replace an ageing vehicle.

Ethical considerations. The Asset Turnover and the Return on Assets are read by outsiders — most often a **lender** deciding whether to advance finance, or a prospective **buyer** valuing the business — so the owner has an ethical duty to build them on a **faithful representation** of the assets. Two temptations arise. First, **overstating non-current assets**: failing to record depreciation at all, or understating it by stretching an asset’s estimated **useful life** or inflating

its estimated **residual value**, keeps carrying amounts (and total assets) too high and inflates net profit at the same time, presenting a business that looks stronger than it is. Second, **short-termism at the expense of the assets themselves**: deferring scheduled maintenance or cutting the repairs budget lifts this year's net profit and Return on Assets, but risks breakdowns, shortens the asset's useful life, and can endanger the safety of employees and customers who rely on the equipment. Ethical management reports non-current assets at their proper carrying amount (cost less accumulated depreciation), maintains them properly rather than starving them to flatter a ratio, and gives lenders and buyers non-financial information honestly, so that the indicators reflect the business's **real** use of its assets.

Worked examples (scaffolded)

Example 1 — calculating Asset Turnover and Return on Assets

Kingsford Kitchens is a trading business. For the year ended 30 June 2026 it reported net sales of \$1 200 000 and a net profit of \$90 000. Its total assets were \$440 000 at 1 July 2025 and \$560 000 at 30 June 2026. Calculate the average total assets, the Asset Turnover and the Return on Assets, and interpret each indicator.

Working	Comment
Average total assets = $(\$440\,000 + \$560\,000) \div 2 = \$500\,000$.	Add the opening and closing totals and halve — the average pool of assets held over the year.
Asset Turnover = $\$1\,200\,000 \div \$500\,000 = 2.4$ times.	Net sales divided by average total assets; expressed as “times”.
Return on Assets = $(\$90\,000 \div \$500\,000) \times 100 = 18.0\%$.	Net profit divided by average total assets, times 100; expressed as a percentage.
<i>Interpret Asset Turnover:</i> the business generated \$2.40 of sales for every \$1.00 of average assets .	A measure of how productively the assets were used to make sales.
<i>Interpret Return on Assets:</i> the business earned 18 cents of net profit for every \$1.00 of average assets .	A measure of how profitably the assets were used.

∴ Kingsford Kitchens turned each dollar of assets into \$2.40 of sales and 18 cents of net profit — a productive and profitable use of the money tied up in its assets.

Example 2 — interpreting the indicators after investing in non-current assets

Brookmere Fitness runs a gym. During the year ended 30 June 2026 it spent heavily on new exercise equipment. Its figures for two years are: **2025** — net sales \$600 000, net profit \$48 000, total assets \$280 000 (opening) and \$320 000 (closing); **2026** — net sales \$720 000, net profit \$54 000, total assets \$320 000 (opening) and \$400 000 (closing). Calculate the Asset Turnover and Return on Assets for each year and interpret the change.

Working	Comment
2025 average total assets = $(\$280\,000 + \$320\,000) \div 2 = \$300\,000$.	The equipment is a non-current asset, so buying it lifts the closing total.
2026 average total assets = $(\$320\,000 + \$400\,000) \div 2 = \$360\,000$.	The larger asset base raises the average.
Asset Turnover: 2025 = $\$600\,000 \div \$300\,000 = 2.0$ times; 2026 = $\$720\,000 \div \$360\,000 = 2.0$ times.	Sales grew in step with assets, so the Asset Turnover held steady.
Return on Assets: 2025 = $(\$48\,000 \div \$300\,000) \times 100 = 16.0\%$; 2026 = $(\$54\,000 \div \$360\,000) \times 100 = 15.0\%$.	Profit grew, but not as fast as the assets, so Return on Assets slipped.

Brookmere Fitness	2025	2026
Asset Turnover	2.0 times	2.0 times
Return on Assets	16.0%	15.0%

∴ the new equipment generated proportionally more sales — Asset Turnover held at 2.0 times — but the extra profit did not keep pace with the enlarged asset base, so Return on Assets eased from 16.0% to 15.0%; in the first year of a

big non-current-asset purchase this is common, and the owner would watch whether profit catches up as the equipment reaches full use.

Worked examples (unscaffolded)

Example 3 — comparing two businesses with the same sales but different asset bases

Delmont Logistics and Ridgeway Couriers each reported net sales of \$900 000 for the year ended 30 June 2026. Delmont earned a net profit of \$72 000 on total assets of \$560 000 (opening) and \$640 000 (closing); Ridgeway earned a net profit of \$63 000 on total assets of \$420 000 (opening) and \$480 000 (closing). Calculate each business's Asset Turnover and Return on Assets and state which uses its assets more effectively.

Delmont's average total assets are $(\$560\,000 + \$640\,000) \div 2 = \$600\,000$, giving an Asset Turnover of $\$900\,000 \div \$600\,000 = \mathbf{1.5\,times}$ and a Return on Assets of $(\$72\,000 \div \$600\,000) \times 100 = \mathbf{12.0\%}$. Ridgeway's average total assets are $(\$420\,000 + \$480\,000) \div 2 = \$450\,000$, giving an Asset Turnover of $\$900\,000 \div \$450\,000 = \mathbf{2.0\,times}$ and a Return on Assets of $(\$63\,000 \div \$450\,000) \times 100 = \mathbf{14.0\%}$. On identical sales, Ridgeway generates more sales (2.0 versus 1.5 times) and more profit (14.0% versus 12.0%) from every dollar of assets. Because vehicles and equipment are the bulk of a courier's assets, this says Ridgeway is running a **leaner, harder-working fleet** — carrying the same revenue on a smaller investment in non-current assets.

∴ Ridgeway Couriers uses its assets more effectively on both measures, earning more sales and more profit per dollar of assets than Delmont, largely because it carries the same trade on a smaller asset base.

Example 4 — reconstructing figures from the indicators

Fernbrook Manufacturing reported an Asset Turnover of 1.6 times and a Return on Assets of 12.0% for the year ended 30 June 2026, on net sales of \$640 000. Its total assets at 30 June 2026 were \$450 000. Calculate the average total assets, the total assets at 1 July 2025, and the net profit for the year.

Because Asset Turnover = net sales $\div$ average total assets, the average total assets are net sales $\div$ Asset Turnover = $\$640\,000 \div 1.6 = \mathbf{\$400\,000}$. The average is (opening + closing) $\div 2$, so opening total assets = $(2 \times \$400\,000) - \text{closing}$ $\$450\,000 = \$800\,000 - \$450\,000 = \mathbf{\$350\,000}$. Because Return on Assets = (net profit $\div$ average total assets) $\times 100$, net profit = $12.0\% \times \$400\,000 = 0.12 \times \$400\,000 = \mathbf{\$48\,000}$.

∴ Fernbrook held average total assets of \$400 000, began the year with \$350 000 of assets and ended with \$450 000, and earned a net profit of \$48 000.

Practice questions — scaffolded

Question 1

Marlow Motors is a trading business. For the year ended 30 June 2026 it reported net sales of \$800 000 and a net profit of \$52 000. Its total assets were \$360 000 at 1 July 2025 and \$440 000 at 30 June 2026.

- Calculate the average total assets.
- Calculate the Asset Turnover.
- Calculate the Return on Assets.

Question 2

Seabrook Stationery reported net sales of \$690 000 and a net profit of \$45 000 for the year ended 30 June 2026. Its total assets were \$300 000 at both 1 July 2025 and 30 June 2026.

- Calculate the average total assets.
- Calculate the Asset Turnover and the Return on Assets.
- Explain in one sentence what the Asset Turnover of the business means, in dollars of sales per dollar of assets.

Question 3

Highfield Hardware refitted its store during 2026, adding new shelving and fittings. Its figures are: **2025** — net sales \$500 000, net profit \$40 000, total assets \$230 000 (opening) and \$270 000 (closing); **2026** — net sales \$540 000, net profit \$36 000, total assets \$270 000 (opening) and \$330 000 (closing).

- Calculate the Asset Turnover for each year.
- Calculate the Return on Assets for each year.
- Interpret the change in the two indicators, referring to the store refit.

Question 4

Oakvale Outdoors reported an Asset Turnover of 2.5 times for the year ended 30 June 2026, on net sales of \$750 000. Its total assets were \$280 000 at 1 July 2025, and its net profit for the year was \$39 000.

- Calculate the average total assets.
- Calculate the total assets at 30 June 2026.
- Calculate the Return on Assets.

Question 5

Pinewood Prints is deciding whether to buy a new large-format printer, a non-current asset. Its current figures for the year ended 30 June 2026 are net sales \$400 000, net profit \$32 000 and average total assets \$200 000. If it buys the printer, it projects net sales of \$504 000, net profit of \$36 000 and average total assets of \$240 000.

- Calculate the current Asset Turnover and Return on Assets.
- Calculate the projected Asset Turnover and Return on Assets if the printer is bought.
- Discuss whether the indicators support buying the printer.

Question 6

Rosewood Removals uses a fleet of trucks. Its figures are: **2025** — net sales \$400 000, net profit \$30 000, average total assets \$200 000; **2026** — net sales \$352 000, net profit \$22 000, average total assets \$220 000.

- Calculate the Asset Turnover and Return on Assets for each year.
- State two pieces of non-financial information about the trucks that would help explain the change in the indicators.
- Explain why cutting the truck-maintenance budget to lift this year's net profit raises an ethical concern.

Practice questions — unscaffolded

Question 7

Tamworth Tiles reported net sales of \$1 100 000 and a net profit of \$66 000 for the year ended 30 June 2026. Its total assets were \$520 000 at 1 July 2025 and \$580 000 at 30 June 2026. Calculate the average total assets, the Asset Turnover and the Return on Assets, and state what each indicator means.

Question 8

Vantage Freight and Cedar Couriers each reported net sales of \$960 000 for the year ended 30 June 2026. Vantage earned a net profit of \$64 000 on total assets of \$760 000 (opening) and \$840 000 (closing); Cedar earned a net profit of \$60 000 on total assets of \$450 000 (opening) and \$510 000 (closing). Calculate each business's Asset Turnover and Return on Assets, and discuss which business uses its assets more effectively.

Question 9

Glenroy Glass reported an Asset Turnover of 1.5 times and a Return on Assets of 9.0% for the year ended 30 June 2026, on net sales of \$600 000. Its total assets at 30 June 2026 were \$430 000. Calculate the average total assets, the net profit for the year, and the total assets at 1 July 2025.

Question 10

Bayfield Bakery installed a new oven (a non-current asset) during 2026. Its figures are: **2025** — net sales \$500 000, net profit \$40 000, average total assets \$250 000; **2026** — net sales \$660 000, net profit \$39 600, average total assets \$300 000. Calculate the Asset Turnover and Return on Assets for each year, and explain how the two indicators can move in opposite directions after the business invests in a non-current asset.

Question 11

Cranfield Crafts sold an idle warehouse (a non-current asset) part-way through 2026. Its figures are: **2025** — net sales \$480 000, net profit \$36 000, average total assets \$300 000; **2026** — net sales \$450 000, net profit \$42 000, average total assets \$250 000. Calculate the Asset Turnover and Return on Assets for each year, and explain how selling an under-used non-current asset can improve both indicators even though sales fell.

Question 12

Answer each part using the indicator formulas.

- A business has net sales of \$700 000 and an Asset Turnover of 2.0 times. Calculate its average total assets.
- A business has average total assets of \$500 000 and a Return on Assets of 12%. Calculate its net profit.
- A business has a net profit of \$45 000 and a Return on Assets of 15%. Calculate its average total assets.
- A business had total assets of \$280 000 (opening) and \$360 000 (closing) and net sales of \$640 000. Calculate its average total assets and its Asset Turnover.

Question 13

Westhaven Timber reported net sales of \$1 600 000 and a net profit of \$120 000 for the year ended 30 June 2026. An extract from its Balance Sheets shows:

Westhaven Timber	1 Jul 2025 \$	30 Jun 2026 \$
Current Assets	180 000	200 000
Non-Current Assets	520 000	700 000
Total Assets	700 000	900 000

Calculate the average total assets, the Asset Turnover and the Return on Assets, and state what percentage of the closing total assets is made up of non-current assets.

Question 14

Marndale Manufacturing is deciding whether to replace a ten-year-old lathe with a modern computer-controlled machine, a non-current asset. Its current figures for the year ended 30 June 2026 are net sales \$560 000, net profit \$36 000 and average total assets \$400 000. It projects that, with the new machine, net sales would rise to \$640 000 and net profit to \$48 000, with average total assets unchanged at \$400 000. Calculate the current and projected Asset Turnover and Return on Assets, and discuss the decision, referring to both the indicators and relevant non-financial information.

Question 15

Explain each of the following in a sentence or two.

- Why non-current assets are the main focus when the Asset Turnover and Return on Assets are interpreted in this chapter.
- The difference between what the Asset Turnover measures and what the Return on Assets measures.
- Why the indicators use **average** total assets rather than the closing total assets.
- Two examples of non-financial information about a non-current asset, and why such information is useful alongside the indicators.

Question 16

Oakhurst Organics reported: **2025** — net sales \$600 000, net profit \$54 000, average total assets \$300 000; **2026** — net sales \$700 000, net profit \$49 000, average total assets \$350 000. Calculate the Asset Turnover and Return on Assets for each year, and explain what it means when the Asset Turnover holds steady but the Return on Assets falls.

Question 17

Larkspur Landscaping (owner J. Larkspur) is applying to Meridian Bank for finance. Its correct figures for the year ended 30 June 2026 are net profit \$48 000, total assets \$390 000 (opening) and \$410 000 (closing). Wanting the reports to look as strong as possible for the bank, the owner proposes to (i) leave this year's \$20 000 depreciation on equipment unrecorded — which would raise net profit to \$68 000 and, by leaving the equipment's carrying amount \$20 000 higher, raise closing total assets to \$430 000 — and (ii) defer \$15 000 of scheduled machinery maintenance until after the loan is approved, to lift the reported net profit. Calculate the correct Return on Assets and the Return on Assets that proposal (i) would produce, then discuss the ethical considerations raised by the owner's proposals, referring to a relevant qualitative characteristic, to non-financial information and to the effect on the bank, and state what should be done.

Question 18

Thornbury Transport bought a new fleet of trucks (non-current assets) during 2026. Its figures are: **2025** — net sales \$800 000, net profit \$52 000, total assets \$380 000 (opening) and \$420 000 (closing); **2026** — net sales \$950 000, net profit \$70 000, total assets \$420 000 (opening) and \$580 000 (closing). Calculate the average total assets, the Asset Turnover and the Return on Assets for each year, present them in an indicator schedule, and interpret the change in the light of the fleet purchase.

Answers

1.
 - a. \$400 000 b. **2.0 times** c. **13.0%**
2.
 - a. \$300 000 b. Asset Turnover **2.3 times**, Return on Assets **15.0%** c. \$2.30 of sales per \$1 of assets
3.
 - a. 2025 **2.0 times**, 2026 **1.8 times** b. 2025 **16.0%**, 2026 **12.0%** c. Both fell — the refit enlarged the asset base before it lifted sales and profit
4.
 - a. \$300 000 b. \$320 000 c. **13.0%**
5.
 - a. **2.0 times, 16.0%** b. **2.1 times, 15.0%** c. Asset Turnover up, Return on Assets down — see solutions
6.
 - a. 2025 **2.0 times, 15.0%**; 2026 **1.6 times, 10.0%** b/c. See solutions
7. Average total assets \$550 000; Asset Turnover **2.0 times**; Return on Assets **12.0%**
8. Vantage **1.2 times, 8.0%**; Cedar **2.0 times, 12.5%**; Cedar uses its assets more effectively
9. Average total assets \$400 000; net profit \$36 000; total assets (opening) \$370 000
10. 2025 **2.0 times, 16.0%**; 2026 **2.2 times, 13.2%**; Asset Turnover up, Return on Assets down
11. 2025 **1.6 times, 12.0%**; 2026 **1.8 times, 16.8%**; both improved despite lower sales
12.
 - a. \$350 000 b. \$60 000 c. \$300 000 d. \$320 000; **2.0 times**
13. Average total assets \$800 000; Asset Turnover **2.0 times**; Return on Assets **15.0%**; non-current assets **77.8%** of closing total assets
14. Current **1.4 times, 9.0%**; projected **1.6 times, 12.0%**; both improve — see solutions
15. See solutions
16. 2025 **2.0 times, 18.0%**; 2026 **2.0 times, 14.0%**; Asset Turnover steady, Return on Assets fell → higher expenses
17. Correct Return on Assets **12.0%**; overstated Return on Assets **16.6%** — see solutions
18. 2025 **2.0 times, 13.0%**; 2026 **1.9 times, 14.0%** — see solutions

Fully-worked solutions

Question 1

- a. Average total assets = $(\$360\,000 + \$440\,000) \div 2 = \$400\,000$.
- b. Asset Turnover = $\$800\,000 \div \$400\,000 = \mathbf{2.0\,times}$.
- c. Return on Assets = $(\$52\,000 \div \$400\,000) \times 100 = \mathbf{13.0\%}$.

Question 2

- a. Average total assets = $(\$300\,000 + \$300\,000) \div 2 = \mathbf{\$300\,000}$ (the total was unchanged over the year, so the average equals either figure).
- b. Asset Turnover = $\$690\,000 \div \$300\,000 = \mathbf{2.3\,times}$; Return on Assets = $(\$45\,000 \div \$300\,000) \times 100 = \mathbf{15.0\%}$.
- c. The Asset Turnover of 2.3 times means Seabrook Stationery generated **\$2.30 of net sales for every \$1.00 of average assets** it controlled during the year.

Question 3

- a. Average total assets: 2025 = $(\$230\,000 + \$270\,000) \div 2 = \$250\,000$; 2026 = $(\$270\,000 + \$330\,000) \div 2 = \$300\,000$. Asset Turnover: 2025 = $\$500\,000 \div \$250\,000 = \mathbf{2.0\,times}$; 2026 = $\$540\,000 \div \$300\,000 = \mathbf{1.8\,times}$.

- b. Return on Assets: 2025 = $(\$40\,000 \div \$250\,000) \times 100 = \mathbf{16.0\%}$; 2026 = $(\$36\,000 \div \$300\,000) \times 100 = \mathbf{12.0\%}$.
- c. Both indicators **fell**: the Asset Turnover from 2.0 to 1.8 times and the Return on Assets from 16.0% to 12.0%. The store refit added new fittings — non-current assets — which enlarged the average asset base from \$250 000 to \$300 000. Net sales rose only modestly and net profit actually fell, so each dollar of the larger asset base now generates fewer sales and less profit. The new fittings have been paid for and are sitting in the asset base **before** they have lifted trade; the owner would expect the indicators to recover if the refit succeeds in drawing more customers, and would use non-financial information (customer numbers, foot traffic and customer feedback on the new layout) to judge whether it is working.

Question 4

- a. Average total assets = net sales $\div$ Asset Turnover = $\$750\,000 \div 2.5 = \mathbf{\$300\,000}$.
- b. Average total assets = (opening + closing) $\div$ 2, so closing = $(2 \times \$300\,000) - \text{opening } \$280\,000 = \$600\,000 - \$280\,000 = \mathbf{\$320\,000}$.
- c. Return on Assets = $(\$39\,000 \div \$300\,000) \times 100 = \mathbf{13.0\%}$.

Question 5

- a. Current Asset Turnover = $\$400\,000 \div \$200\,000 = \mathbf{2.0 \text{ times}}$; current Return on Assets = $(\$32\,000 \div \$200\,000) \times 100 = \mathbf{16.0\%}$.
- b. Projected Asset Turnover = $\$504\,000 \div \$240\,000 = \mathbf{2.1 \text{ times}}$; projected Return on Assets = $(\$36\,000 \div \$240\,000) \times 100 = \mathbf{15.0\%}$.
- c. Buying the printer would lift the **Asset Turnover** slightly, from 2.0 to 2.1 times — the extra sales it makes possible more than cover the extra assets, so the assets stay productive. But the **Return on Assets** would **fall**, from 16.0% to 15.0%: although net profit rises from \$32 000 to \$36 000, the asset base grows faster (from \$200 000 to \$240 000), so each dollar of assets earns slightly less profit, because the printer brings extra depreciation and running costs. The indicators are therefore **mixed** — more productive but slightly less profitable per asset dollar. The decision should not rest on the ratios alone: the owner should also weigh **non-financial information** such as whether the printer lets the business take on work it currently turns away, its reliability, and the quality of its output, and whether the small drop in Return on Assets is an acceptable price for the extra capacity.

Question 6

- a. Asset Turnover: 2025 = $\$400\,000 \div \$200\,000 = \mathbf{2.0 \text{ times}}$; 2026 = $\$352\,000 \div \$220\,000 = \mathbf{1.6 \text{ times}}$. Return on Assets: 2025 = $(\$30\,000 \div \$200\,000) \times 100 = \mathbf{15.0\%}$; 2026 = $(\$22\,000 \div \$220\,000) \times 100 = \mathbf{10.0\%}$. Both indicators fell sharply.
- b. Useful non-financial information about the trucks includes: their **age and condition**; the **number of breakdowns** and days of **downtime** during the year; the **hours each truck was used** (capacity utilisation); **fuel efficiency**; and the **safety record** of the fleet. Any of these would help explain why the trucks generated fewer sales and less profit per asset dollar — for example, an ageing fleet that spent more time off the road.
- c. Cutting the truck-maintenance budget would **reduce repair expenses**, lifting this year's net profit and Return on Assets, so on paper the business would look more profitable. But maintenance keeps the trucks **safe and reliable**: deferring it risks breakdowns, shortens the trucks' useful life, and can endanger drivers and other road users. Sacrificing the safety and long-term condition of the assets to flatter a short-term profit figure is **short-termism** and breaches the owner's ethical duty of care; the reported improvement would not reflect a genuinely better use of the assets.

Question 7

Average total assets = $(\$520\,000 + \$580\,000) \div 2 = \mathbf{\$550\,000}$. Asset Turnover = $\$1\,100\,000 \div \$550\,000 = \mathbf{2.0 \text{ times}}$. Return on Assets = $(\$66\,000 \div \$550\,000) \times 100 = \mathbf{12.0\%}$. The business generated **\$2.00 of net sales** for every \$1.00 of average assets and earned **12 cents of net profit** for every \$1.00 of average assets during the year.

Question 8

Vantage: average total assets = $(\$760\,000 + \$840\,000) \div 2 = \$800\,000$; Asset Turnover = $\$960\,000 \div \$800\,000 = \mathbf{1.2 \text{ times}}$; Return on Assets = $(\$64\,000 \div \$800\,000) \times 100 = \mathbf{8.0\%}$.

Cedar: average total assets = $(\$450\,000 + \$510\,000) \div 2 = \$480\,000$; Asset Turnover = $\$960\,000 \div \$480\,000 = \mathbf{2.0 \text{ times}}$; Return on Assets = $(\$60\,000 \div \$480\,000) \times 100 = \mathbf{12.5\%}$.

On **identical net sales of \$960 000**, Cedar Couriers uses its assets far more effectively on **both** measures. Its Asset Turnover of 2.0 times against Vantage's 1.2 means it makes \$2.00 of sales from every asset dollar where Vantage makes only \$1.20, and its Return on Assets of 12.5% against 8.0% means it earns 12.5 cents of profit per asset dollar where Vantage earns 8 cents. Because vehicles and equipment are the bulk of a freight or courier business's assets, this says Cedar carries the same revenue on a **much smaller and harder-working investment in non-current assets**, while Vantage has a large asset base — a \$800 000 average against \$480 000 — that is not pulling its weight. Vantage should investigate whether some of its non-current assets are under-used and could be sold or worked harder.

Question 9

Average total assets = net sales $\div$ Asset Turnover = $\$600\,000 \div 1.5 = \mathbf{\$400\,000}$. Net profit = Return on Assets $\times$ average total assets = $9.0\% \times \$400\,000 = 0.09 \times \$400\,000 = \mathbf{\$36\,000}$. Average total assets = (opening + closing) $\div 2$, so opening = $(2 \times \$400\,000) - \text{closing } \$430\,000 = \$800\,000 - \$430\,000 = \mathbf{\$370\,000}$.

Question 10

Asset Turnover: 2025 = $\$500\,000 \div \$250\,000 = \mathbf{2.0 \text{ times}}$; 2026 = $\$660\,000 \div \$300\,000 = \mathbf{2.2 \text{ times}}$. Return on Assets: 2025 = $(\$40\,000 \div \$250\,000) \times 100 = \mathbf{16.0\%}$; 2026 = $(\$39\,600 \div \$300\,000) \times 100 = \mathbf{13.2\%}$.

The two indicators moved in **opposite directions**: the Asset Turnover **rose** (2.0 $\rightarrow$ 2.2 times) while the Return on Assets **fell** (16.0% $\rightarrow$ 13.2%). Installing the new oven — a non-current asset — enlarged the average asset base from \$250 000 to \$300 000, and it lifted sales strongly, so each asset dollar now generates **more sales** (Asset Turnover up). But net profit barely changed (\$40 000 $\rightarrow$ \$39 600), because the oven brought extra depreciation and running costs that ate into the profit on the extra sales; so each asset dollar now earns **less profit** (Return on Assets down). A non-current-asset purchase that lifts sales faster than profit produces exactly this pattern — more productive, but less profitable per dollar of assets, at least until the higher sales feed through to profit.

Question 11

Asset Turnover: 2025 = $\$480\,000 \div \$300\,000 = \mathbf{1.6 \text{ times}}$; 2026 = $\$450\,000 \div \$250\,000 = \mathbf{1.8 \text{ times}}$. Return on Assets: 2025 = $(\$36\,000 \div \$300\,000) \times 100 = \mathbf{12.0\%}$; 2026 = $(\$42\,000 \div \$250\,000) \times 100 = \mathbf{16.8\%}$.

Both indicators **improved even though net sales fell** (\$480 000 $\rightarrow$ \$450 000). Selling the idle warehouse — an under-used non-current asset — cut the average asset base from \$300 000 to \$250 000. The warehouse had been generating little sales and no extra profit while sitting in the asset base, so removing it lost only a small amount of sales but a much larger slice of unproductive assets: each remaining asset dollar now supports **more sales** (Asset Turnover 1.6 $\rightarrow$ 1.8 times). Net profit actually **rose** (\$36 000 $\rightarrow$ \$42 000), because the business shed the warehouse's holding costs (rates, insurance, depreciation), so each asset dollar now earns **more profit** (Return on Assets 12.0% $\rightarrow$ 16.8%). Disposing of an under-used non-current asset is a classic way to lift both indicators at once.

Question 12

- Average total assets = net sales $\div$ Asset Turnover = $\$700\,000 \div 2.0 = \mathbf{\$350\,000}$.
- Net profit = Return on Assets $\times$ average total assets = $12\% \times \$500\,000 = 0.12 \times \$500\,000 = \mathbf{\$60\,000}$.
- Average total assets = net profit $\div$ Return on Assets = $\$45\,000 \div 0.15 = \mathbf{\$300\,000}$.
- Average total assets = $(\$280\,000 + \$360\,000) \div 2 = \mathbf{\$320\,000}$; Asset Turnover = $\$640\,000 \div \$320\,000 = \mathbf{2.0 \text{ times}}$.

Question 13

Average total assets = $(\$700\,000 + \$900\,000) \div 2 = \mathbf{\$800\,000}$. Asset Turnover = $\$1\,600\,000 \div \$800\,000 = \mathbf{2.0 \text{ times}}$. Return on Assets = $(\$120\,000 \div \$800\,000) \times 100 = \mathbf{15.0\%}$.

Non-current assets are \$700 000 of the \$900 000 closing total assets, or $(\$700\,000 \div \$900\,000) \times 100 = 77.8\%$. More than three-quarters of everything Westhaven Timber controls is tied up in non-current assets, so the Asset Turnover of 2.0 times and the Return on Assets of 15.0% are, in substance, a verdict on how well it uses its **timber-yard equipment, vehicles and premises**.

Question 14

Current Asset Turnover = $\$560\,000 \div \$400\,000 = 1.4$ times; current Return on Assets = $(\$36\,000 \div \$400\,000) \times 100 = 9.0\%$. Projected Asset Turnover = $\$640\,000 \div \$400\,000 = 1.6$ times; projected Return on Assets = $(\$48\,000 \div \$400\,000) \times 100 = 12.0\%$.

Both indicators would **improve**: the Asset Turnover from 1.4 to 1.6 times and the Return on Assets from 9.0% to 12.0%. Because the new computer-controlled machine replaces the old lathe rather than adding to the asset base, average total assets stay at \$400 000, so the higher sales and profit translate directly into better asset use — each asset dollar would generate more sales and more profit. The financial case is therefore strong. It should be weighed against relevant **non-financial information**: the new machine's **reliability** and reduced **downtime**, its **energy efficiency**, the **precision and quality** of its output, whether operators need **retraining** to run it safely, and any disruption while it is installed. On the numbers, and provided the non-financial factors are favourable and the business can fund the purchase, replacing the ten-year-old lathe is supported.

Question 15

- In most businesses **non-current assets make up the greatest share of total assets**, so, although the indicators are calculated on total assets, a decision about non-current assets — buying, replacing or disposing of them, and the depreciation charged on those already held — changes the asset base more than anything else and moves the Asset Turnover and Return on Assets the most; the indicators are largely a verdict on how well the non-current assets are used.
- The **Asset Turnover measures how productively** the assets generate **sales** (net sales per dollar of assets, in “times”); the **Return on Assets measures how profitably** the assets generate **profit** (net profit per dollar of assets, as a percentage). One is about turning assets into sales, the other about turning assets into profit.
- The indicators use **average** total assets because sales and profit are earned **over the whole period**, while a Balance Sheet reports assets on a **single day**. If the asset base changed during the year — as it does when a business buys or sells non-current assets — matching a full year's sales or profit against the closing figure alone would distort the comparison, so the average of the opening and closing totals is used.
- Non-financial information about a non-current asset includes, for example, its **age and condition** and how often it **breaks down**, or how **intensively it is used** (its operating hours or idle time). Such information is useful alongside the indicators because the ratios show *that* asset use has changed but not *why*; the non-financial information **explains** the movement and helps the owner decide what to do — for instance, whether an ageing, unreliable machine should be repaired or replaced.

Question 16

Asset Turnover: 2025 = $\$600\,000 \div \$300\,000 = 2.0$ times; 2026 = $\$700\,000 \div \$350\,000 = 2.0$ times. Return on Assets: 2025 = $(\$54\,000 \div \$300\,000) \times 100 = 18.0\%$; 2026 = $(\$49\,000 \div \$350\,000) \times 100 = 14.0\%$.

The **Asset Turnover held steady** at 2.0 times: sales grew in exact proportion to the enlarged asset base, so the assets were **just as productive at generating sales** in 2026 as in 2025 — the extra assets pulled their weight in sales terms. Yet the **Return on Assets fell** from 18.0% to 14.0%. Because the assets kept turning sales over at the same rate, the drop in profitability cannot be blamed on the assets being under-used; it must come from **profit not keeping pace with sales** — that is, **expenses rising faster than sales**. The business is using its assets to make sales as effectively as before, but is keeping fewer cents of each sales dollar (and so of each asset dollar) as profit; the owner should review the operating expenses rather than the asset base.

Question 17

Correctly, average total assets = $(\$390\,000 + \$410\,000) \div 2 = \$400\,000$, so Return on Assets = $(\$48\,000 \div \$400\,000) \times 100 = 12.0\%$. Under proposal (i), net profit becomes \$68 000 and closing total assets become \$430 000, so average

total assets become $(\$390\,000 + \$430\,000) \div 2 = \$410\,000$ and the reported Return on Assets becomes $(\$68\,000 \div \$410\,000) \times 100 = \mathbf{16.6\%}$.

Both proposals breach the owner's ethical duty to present the reports as a **faithful representation** — complete, free from material error and neutral (without bias). Proposal (i) leaves out depreciation that has genuinely been consumed, **overstating both net profit and the carrying amount of the equipment**, so the Return on Assets is inflated from a true 12.0% to a flattering 16.6% and the total assets shown to the bank are too high; the reports no longer represent how the business has really used its assets. Proposal (ii) **defers essential maintenance** purely to lift the reported profit — a decision that sacrifices **non-financial** qualities of the assets, since unmaintained machinery is less reliable and less safe and will wear out sooner; the bank, which may also ask about the age, condition and maintenance of the assets securing its loan, would be given a misleading picture on both the financial and the non-financial side. Acting on the inflated 16.6% Return on Assets and the flattered asset base, **Meridian Bank** could advance finance the business cannot in fact service, exposing the bank to loss and the owner to loss of trust and possible legal consequences once the true position emerges. The owner should **record the \$20 000 depreciation**, report the true Return on Assets of **12.0%**, **carry out the scheduled maintenance**, and give the bank honest financial and non-financial information about the assets.

Question 18

Average total assets: 2025 = $(\$380\,000 + \$420\,000) \div 2 = \$400\,000$; 2026 = $(\$420\,000 + \$580\,000) \div 2 = \$500\,000$.
Asset Turnover: 2025 = $\$800\,000 \div \$400\,000 = \mathbf{2.0\ times}$; 2026 = $\$950\,000 \div \$500\,000 = \mathbf{1.9\ times}$. Return on Assets: 2025 = $(\$52\,000 \div \$400\,000) \times 100 = \mathbf{13.0\%}$; 2026 = $(\$70\,000 \div \$500\,000) \times 100 = \mathbf{14.0\%}$.

Thornbury Transport	2025	2026
Asset Turnover	2.0 times	1.9 times
Return on Assets	13.0%	14.0%

The new fleet of trucks — non-current assets — lifted average total assets sharply, from \$400 000 to \$500 000. The **Asset Turnover eased** slightly, from 2.0 to 1.9 times: sales grew strongly (\$800 000 → \$950 000) but not quite fast enough to keep pace with the enlarged asset base in the trucks' first year, so each asset dollar generated a little less sales than before — a common short-term effect when new non-current assets are added before they reach full use. The **Return on Assets, however, rose** from 13.0% to 14.0%: net profit grew from \$52 000 to \$70 000, faster in proportion than the asset base, so each asset dollar earned **more profit**. Overall the fleet purchase is already paying off in profit terms; the owner should watch the Asset Turnover next year, expecting it to recover as the new trucks are worked to full capacity, and would draw on non-financial information — the trucks' utilisation, reliability and fuel efficiency — to confirm the investment is delivering.

Topic 5 Test A — Recording and analysis

Reading time: 10 minutes · Writing time: 50 minutes · 50 marks · A scientific calculator may be used.

This test is cumulative over Chapter 16 (managing non-current assets: valuation, depreciation by both methods, reporting, and non-current-asset indicators). Show all working. Report titles, classifications and General Journal narrations carry marks.

Question 1 (14 marks)

Tarranvale Freight Services is a courier business that reports annually to 30 June. On **1 July 2024** it bought a delivery truck, paying by EFT (**EFT 480**). The supplier's and other documents showed: the truck \$60 000 (plus GST); delivery of the truck to the depot \$1 800 (plus GST); a cargo barrier and shelving fitted before the truck entered service \$2 200 (plus GST); the first year's registration \$900; and the first year's insurance \$1 600. The business estimates a residual value of \$10 000 and a useful life of 5 years, and uses the straight-line method.

- a. Calculate the cost of the truck. State which **two** outlays are excluded from the cost, and why. 3 marks
- b. Record the payment for the truck in the Cash Payments Journal. 3 marks
- c. Calculate the annual straight-line depreciation, and prepare a depreciation schedule for the three years ended 30 June 2025, 2026 and 2027 (depreciation expense, accumulated depreciation and carrying amount). 4 marks
- d. Record the General Journal entry for depreciation for the year ended 30 June 2027, and report the truck's depreciation in the Income Statement (extract) and the truck in the Balance Sheet (Non-Current Assets extract) as at 30 June 2027. 3 marks
- e. Explain why the depreciation in part **d.** is recorded in the General Journal, when the purchase in part **b.** is not. 1 mark

Question 2 (11 marks)

Cedar Ridge Sawmill buys a wood chipper for a cost of \$50 000, estimating a residual value of \$5 000 and a useful life of 4 years. The owner wants to compare the straight-line method with the reducing-balance method at 40% per annum.

- a. Prepare a **straight-line** depreciation schedule for the full 4 years. 4 marks
- b. Prepare a **reducing-balance** depreciation schedule at 40% per annum for the full 4 years. 4 marks
- c. State which method reports the lower net profit in year 1, and by how much. 1 mark
- d. The chipper does most of its work in its first two years and needs increasing repairs as it ages. Recommend a depreciation method for the chipper and justify your choice, referring to a relevant qualitative characteristic. 2 marks

Question 3 (9 marks)

Harbourside Medical Centre reports annually to 30 June and uses the straight-line method. At 30 June 2026 it owns two non-current assets:

- **consulting equipment** bought on 1 July 2023 for \$48 000 (residual value \$6 000, useful life 6 years); and
- a **motor vehicle** bought on 1 March 2026 for \$40 000 (residual value \$4 000, useful life 5 years).

- a. Calculate the depreciation expense for the year ended 30 June 2026 for **each** asset. (Note the vehicle was bought part-way through the year.) 4 marks
- b. Prepare the Income Statement (extract) showing the depreciation expense for the year ended 30 June 2026. 2 marks
- c. Prepare the Non-Current Assets section of the Balance Sheet as at 30 June 2026, showing each asset at its carrying amount, and state the total non-current assets. 3 marks

Question 4 (10 marks)

Pinnacle Couriers is a delivery business. During the year ended 30 June 2026 it bought a number of new delivery vehicles. Its figures for two years are:

Pinnacle Couriers	2025 \$	2026 \$
Net sales	640 000	800 000
Net profit	48 000	52 000
Total assets (opening)	300 000	340 000
Total assets (closing)	340 000	460 000

- a. Calculate the average total assets, the Asset Turnover and the Return on Assets for **2025** and for **2026**. 5 marks
- b. Referring to **both** indicators, interpret the change from 2025 to 2026 in light of the vehicles purchased during the year. 2 marks
- c. The owner projects that in the year ending 30 June 2027 the new vehicles, worked to full use, will lift net sales to \$960 000 and net profit to \$64 000, with average total assets unchanged at \$400 000. **Model** the projected Asset Turnover and Return on Assets, and state whether they support the owner's expectation. 3 marks

Question 5 (6 marks)

Grandview Retailers (owner K. Danvers) is applying to its bank for a loan. It recently bought machinery for \$60 000, estimating a residual value of \$6 000 and a useful life of 5 years, depreciated by the straight-line method. Shortly before balance day, with profit likely to fall just short of the bank's requirement, the owner instructs the accountant to **extend the estimated useful life of the machinery from 5 years to 8 years** "because it lowers the depreciation expense and lifts the reported profit, which will look better to the bank".

- a. Calculate the annual straight-line depreciation under the 5-year life and under the 8-year life, and state the effect of the change on the reported net profit. 2 marks
- b. **Discuss** the ethical considerations raised by the owner's instruction, referring to a relevant qualitative characteristic and to the effect on the bank. 4 marks

Topic 5 Test A — solutions

Question 1

- a. The delivery and the cargo barrier and shelving are needed to acquire the truck and get it ready for use, so they are **capitalised**:

Cost component	\$
Purchase price	60 000
Delivery to depot	1 800
Cargo barrier and shelving fitted	2 200
Cost of truck	64 000

Cost of truck = \$60 000 + \$1 800 + \$2 200 = **\$64 000**. The **registration \$900** and **insurance \$1 600** are **excluded** — they are ongoing running costs (revenue expenditure) that keep the truck operating each year, not part of the price paid to acquire it, so they are reported as expenses of the period.

- b. $\text{GST} = 10\% \times \$64\,000 = \$6\,400$; the amount paid by EFT (Bank) = \$64 000 + \$6 400 = \$70 400. The GST-exclusive cost goes in **Sundries** against the asset account, the GST paid goes in the **GST** column, and the full amount paid goes in **Bank**.

Cash Payments Journal (extract) — Tarranvale Freight Services (July 2024)

Date 2024	Details	Chq/EFT	Bank \$	GST \$	Sundries \$
Jul 1	Delivery Truck	EFT 480	70 400	6 400	64 000

Cross-check: Bank \$70 400 = GST \$6 400 + Sundries \$64 000.

- c. Annual depreciation = $(\$64\,000 - \$10\,000) \div 5 = \$54\,000 \div 5 = \mathbf{\$10\,800}$.

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			64 000
30 June 2025	10 800	10 800	53 200
30 June 2026	10 800	21 600	42 400
30 June 2027	10 800	32 400	31 600

- d. Accumulated depreciation at 30 June 2027 = $3 \times \$10\,800 = \$32\,400$, so the carrying amount = \$64 000 – \$32 400 = \$31 600.

General Journal

Date 2027	Details	Debit \$	Credit \$
Jun 30	Depreciation – Delivery truck	10 800	
	Accumulated Depreciation – Delivery truck		10 800
	<i>Depreciation of the delivery truck for the year ended 30 June 2027 (Memo 33)</i>		

Income Statement (extract) for the year
ended 30 June 2027

\$

Other Expenses

Depreciation – Delivery truck 10 800

Balance Sheet (extract) as
at 30 June 2027

\$

\$

Non-Current Assets

Delivery truck (at cost)	64 000	
less Accumulated Depreciation	32 400	31 600

- e. Which book of original entry is used depends on **how the transaction is settled**, not on what is bought. The truck was paid for immediately by EFT, so the purchase is a **cash payment** and belongs in the **Cash Payments Journal**. Depreciation moves **no cash** — it is an internal, non-cash allocation of the truck's cost to the period that used it — so no special journal fits it and it is recorded in the **General Journal**.

Question 2

- a. Straight-line = $(\$50\,000 - \$5\,000) \div 4 = \$45\,000 \div 4 = \$11\,250$ per year.

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			50 000
1	11 250	11 250	38 750
2	11 250	22 500	27 500
3	11 250	33 750	16 250
4	11 250	45 000	5 000

The final carrying amount (\$5 000) equals the residual value; straight-line writes the depreciable amount (\$45 000) down exactly over the life.

- b. Reducing balance at 40% — each year's charge = $40\% \times \text{carrying amount at the start of the year}$:

Year	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			50 000
1	20 000	20 000	30 000
2	12 000	32 000	18 000
3	7 200	39 200	10 800
4	4 320	43 520	6 480

Year 1 = $40\% \times \$50\,000 = \$20\,000$; year 2 = $40\% \times \$30\,000 = \$12\,000$; year 3 = $40\% \times \$18\,000 = \$7\,200$; year 4 = $40\% \times \$10\,800 = \$4\,320$. The residual value is not used, and the carrying amount never quite reaches it.

- c. In year 1 reducing balance charges \$20 000 against straight-line's \$11 250 — a larger expense and therefore a smaller net profit. So **reducing balance reports the lower net profit in year 1, by \$20 000 – \$11 250 = \$8 750**.
- d. The **reducing-balance** method is recommended. Depreciation should allocate the asset's cost in a pattern that reflects how its **economic benefit is consumed**. The chipper does most of its work — and loses most of its benefit — in its first two years, and its repair costs rise as it ages, so a **front-loaded** charge (large early, tapering later) is a more **faithful representation** of how the benefit is used up than the flat \$11 250 straight-line charge. Reducing balance also produces a steadier *total* expense (depreciation plus repairs) across the

chipper's life. Whichever method is chosen must then be applied **consistently** so the reports stay comparable from year to year.

Question 3

- a. **Consulting equipment:** $(\$48\,000 - \$6\,000) \div 6 = \$42\,000 \div 6 = \$7\,000$ (held the whole year, so a full year's charge). **Motor vehicle:** full-year depreciation = $(\$40\,000 - \$4\,000) \div 5 = \$36\,000 \div 5 = \$7\,200$; bought 1 March, held 4 months (March–June), so $\$7\,200 \times 4 \div 12 = \$2\,400$.

Income Statement (extract)
for the year ended 30 June

2026	\$	\$
Other Expenses		
Depreciation – Equipment	7 000	
Depreciation – Motor vehicle	2 400	
Total depreciation		9 400

- c. Equipment: accumulated depreciation = $3 \times \$7\,000 = \$21\,000$, carrying amount = $\$48\,000 - \$21\,000 = \$27\,000$. Motor vehicle: accumulated depreciation = $\$2\,400$, carrying amount = $\$40\,000 - \$2\,400 = \$37\,600$.

Balance Sheet (extract) as
at 30 June 2026

	\$	\$
Non-Current Assets		
Equipment (at cost)	48 000	
less Accumulated Depreciation – Equipment	21 000	27 000
Motor vehicle (at cost)	40 000	
less Accumulated Depreciation – Motor vehicle	2 400	37 600
Total Non-Current Assets		64 600

Total non-current assets = $\$27\,000 + \$37\,600 = \$64\,600$.

Question 4

- a. **2025:** average total assets = $(\$300\,000 + \$340\,000) \div 2 = \$320\,000$; Asset Turnover = $\$640\,000 \div \$320\,000 = 2.0$ times; Return on Assets = $(\$48\,000 \div \$320\,000) \times 100 = 15.0\%$. **2026:** average total assets = $(\$340\,000 + \$460\,000) \div 2 = \$400\,000$; Asset Turnover = $\$800\,000 \div \$400\,000 = 2.0$ times; Return on Assets = $(\$52\,000 \div \$400\,000) \times 100 = 13.0\%$.

Pinnacle Couriers	2025	2026
Average total assets	\$320 000	\$400 000
Asset Turnover	2.0 times	2.0 times
Return on Assets	15.0%	13.0%

- b. The **Asset Turnover held steady** at 2.0 times: net sales grew in step with the enlarged asset base, so each asset dollar was **just as productive at generating sales** in 2026 as in 2025 — the new vehicles pulled their weight in sales terms. But the **Return on Assets fell** from 15.0% to 13.0%: net profit grew only modestly ($\$48\,000 \rightarrow \$52\,000$) while the average asset base grew faster ($\$320\,000 \rightarrow \$400\,000$), so each asset dollar earned **less profit**. This is the common first-year pattern after a large non-current-asset purchase — the vehicles have enlarged the asset base (and brought extra depreciation and running costs) **before** they have had time to generate their full profit.
- c. Projected Asset Turnover = $\$960\,000 \div \$400\,000 = 2.4$ times; projected Return on Assets = $(\$64\,000 \div \$400\,000) \times 100 = 16.0\%$. Both indicators **improve** on 2026 (Asset Turnover 2.0 $\rightarrow$ 2.4 times, Return on Assets

13.0% → 16.0%), so the projection **supports the owner's expectation** that the fleet will earn its keep once fully used: with the asset base held at \$400 000, the higher sales and profit translate directly into more sales and more profit per asset dollar. (The projection depends on the vehicles actually reaching full use and the margins holding, so the owner should confirm it against non-financial information such as the vehicles' utilisation and running costs.)

Question 5

- a. 5-year life: $(\$60\,000 - \$6\,000) \div 5 = \$54\,000 \div 5 = \mathbf{\$10\,800}$. 8-year life: $\$54\,000 \div 8 = \mathbf{\$6\,750}$. Extending the life cuts the annual depreciation by $\$10\,800 - \$6\,750 = \$4\,050$, so the change would **increase the reported net profit by \$4 050** (a smaller expense).
- b. The instruction is **unethical**. Useful life is an estimate that should reflect how long the machinery is **genuinely expected to be used**; here it is being changed not because new evidence shows the machinery will last longer, but purely to **lower depreciation and inflate reported profit** so the business appears to meet the bank's requirement. This breaches **faithful representation**: reports are meant to be complete, neutral and free from bias, and a profit figure engineered to clear a loan hurdle is biased towards the owner's interest. It also undermines **comparability**, because this year's result would no longer be prepared on the same basis as prior years even though the machinery is used no differently. The **bank** is the stakeholder most exposed — it could advance finance against an overstated profit (and an overstated carrying amount) and so misjudge the risk of not being repaid; the owner also risks a loan the business cannot service, a loss of trust and possible legal consequences if the misstatement is later discovered. The accountant should **refuse** to change the estimate without genuine supporting evidence: if the machinery's realistic life is 5 years, the \$10 800 charge should stand — even if that means reporting a profit below the bank's requirement — and the basis used should be disclosed so the bank is not misled.

Topic 5 Test B — Short-answer recording

Reading time: 10 minutes · Writing time: 45 minutes · 40 marks · A scientific calculator may be used.

This test is cumulative over Chapter 16. Show all working. General Journal narrations are required where an entry is asked for.

Question 1 (7 marks)

Willow Creek Dental buys equipment on **1 July 2025** for \$27 000, estimating a residual value of \$3 000 and a useful life of 6 years. It uses the straight-line method and reports annually to 30 June.

- a. Calculate the annual depreciation. 1 mark
- b. Record the General Journal entry for depreciation for the year ended 30 June 2026. 2 marks
- c. State the carrying amount of the equipment at 30 June 2026 and at 30 June 2027 (assume no other movements). 2 marks
- d. Explain why the depreciation is credited to **Accumulated Depreciation – Equipment** rather than to the **Equipment** account. 2 marks

Question 2 (7 marks)

Quarryhill Logistics buys a forklift on **1 July 2024** for a cost of \$45 000 and depreciates it by the reducing-balance method at 20% per annum. It reports annually to 30 June.

- a. Prepare a depreciation schedule for the three years ended 30 June 2025, 2026 and 2027. 4 marks
- b. State the depreciation expense reported in the Income Statement for the year ended 30 June 2026. 1 mark
- c. State the carrying amount of the forklift at 30 June 2027. 1 mark
- d. Explain why the depreciation charge falls each year under the reducing-balance method. 1 mark

Question 3 (6 marks)

Blackwood Cabinets buys a panel saw, paying by EFT. All amounts shown on the documents are **GST-inclusive**: the saw \$38 500; delivery \$1 100; installation before use \$2 200; and a first-year service plan \$660.

- a. Calculate the cost of the panel saw (GST-exclusive). 3 marks
- b. State how the first-year service plan is treated, and why. 1 mark
- c. Explain why the GST paid is not included in the cost of the saw. 2 marks

Question 4 (6 marks)

Mossvale Café buys a coffee roaster on **1 April 2026** for \$16 000, estimating a residual value of \$1 600 and a useful life of 4 years. It uses the straight-line method and reports annually to 30 June.

- a. Calculate the depreciation for a full year. 1 mark
- b. Calculate the depreciation to be recorded for the year ended 30 June 2026, and state the carrying amount of the roaster at that date. 3 marks
- c. In preparing the reports, a junior bookkeeper recorded a full year's depreciation of \$3 600 for the year ended 30 June 2026. State the correct amount and explain the adjustment needed to correct the error. 2 marks

Question 5 (5 marks)

At 30 June 2026 the records of *Ravenhall Engineering* show the following non-current assets:

Asset	Accumulated depreciation	
	Cost \$	\$
Machinery	70 000	28 000
Motor vehicle	36 000	21 600
Office equipment	12 000	4 800

a. Prepare the Non-Current Assets section of the Balance Sheet as at 30 June 2026, showing each asset at its carrying amount. 4 marks

b. State the total carrying amount of the non-current assets. 1 mark

Question 6 (5 marks)

Answer each part using the depreciation formulas.

a. A machine that cost \$34 000 is depreciated by the straight-line method by \$5 000 per year over a useful life of 6 years. Calculate the estimated **residual value** the business must have used. 2 marks

b. A forklift that cost \$40 000 is depreciated by the reducing-balance method. The depreciation charged in year 1 is \$10 000. Calculate the reducing-balance **rate**, and the depreciation charge for **year 2**. 3 marks

Question 7 (4 marks)

a. Define **depreciation**. 1 mark

b. Explain why the carrying amount of a non-current asset reported in the Balance Sheet is unlikely to equal the amount for which the asset could be sold. 2 marks

c. State one accounting assumption or qualitative characteristic that supports charging depreciation as an expense in **each** period the asset is used. 1 mark

Topic 5 Test B — solutions

Question 1

- a. Annual depreciation = $(\$27\,000 - \$3\,000) \div 6 = \$24\,000 \div 6 = \$4\,000$ per year.

General Journal

Date 2026	Details	Debit \$	Credit \$
Jun 30	Depreciation – Equipment	4 000	
	Accumulated Depreciation – Equipment		4 000
	<i>Depreciation of equipment for the year ended 30 June 2026 (Memo 14)</i>		

- c. Carrying amount at 30 June 2026 = $\$27\,000 - \$4\,000 = \$23\,000$; at 30 June 2027 = $\$27\,000 - (2 \times \$4\,000) = \$19\,000$.
- d. Crediting a separate **Accumulated Depreciation** account (a contra-asset) rather than the asset itself keeps the equipment reported at its **original, verifiable cost** while a running total of all depreciation charged to date builds up alongside it. A reader of the reports can then see **both** the historical cost of the equipment **and** how much of that cost has been consumed; the carrying amount is the difference between the two.

Question 2

- a. Reducing balance at 20% — each year's charge = $20\% \times$ carrying amount at the start of the year:

Year ended	Depreciation \$	Accumulated depreciation \$	Carrying amount \$
At cost			45 000
30 June 2025	9 000	9 000	36 000
30 June 2026	7 200	16 200	28 800
30 June 2027	5 760	21 960	23 040

Year 1 = $20\% \times \$45\,000 = \$9\,000$; year 2 = $20\% \times \$36\,000 = \$7\,200$; year 3 = $20\% \times \$28\,800 = \$5\,760$.

- b. Depreciation reported in the Income Statement for the year ended 30 June 2026 = **\$7 200** (the year-2 charge).
- c. Carrying amount at 30 June 2027 = **\$23 040**.
- d. Under reducing balance the fixed rate (20%) is applied to the **carrying amount at the start of each year**. Because each year's depreciation reduces the carrying amount, the base to which the rate is applied is **smaller every year**, so the charge falls year after year.

Question 3

- a. Extract the GST (1/11) from each capitalised amount: saw $\$38\,500 \rightarrow$ GST $\$3\,500$, net $\$35\,000$; delivery $\$1\,100 \rightarrow$ GST $\$100$, net $\$1\,000$; installation $\$2\,200 \rightarrow$ GST $\$200$, net $\$2\,000$. All three are necessary to acquire the saw and ready it for use, so all are capitalised.

Cost component	\$
Purchase price (ex-GST)	35 000
Delivery (ex-GST)	1 000
Installation (ex-GST)	2 000
Cost of panel saw	38 000

Cost of panel saw = $\$35\,000 + \$1\,000 + \$2\,000 = \$38\,000$.

- b. The first-year service plan (net \$600) is **revenue expenditure** — an ongoing running cost that keeps the saw operating and benefits only the current period — so it is reported as an **expense**, not added to the cost of the saw.
- c. The business is registered for GST, so the GST it pays on the saw is **claimed back** from the ATO through the **GST Clearing** account — it is not a cost the business ultimately bears. The saw is therefore recorded at its **GST-exclusive** amount. (The GST on the three capitalised items totals $\$3\,500 + \$100 + \$200 = \$3\,800$.)

Question 4

- a. Full-year depreciation = $(\$16\,000 - \$1\,600) \div 4 = \$14\,400 \div 4 = \mathbf{\$3\,600}$.
- b. The roaster was bought on 1 April, so it was held for 3 months (April–June): part-year depreciation = $\$3\,600 \times 3 \div 12 = \mathbf{\$900}$. Carrying amount at 30 June 2026 = $\$16\,000 - \$900 = \mathbf{\$15\,100}$.
- c. Only **\$900** should be charged — the roaster was held for just 3 of the 12 months. The junior recorded \$3 600, overstating the depreciation expense (and accumulated depreciation) by $\$3\,600 - \$900 = \mathbf{\$2\,700}$. The adjustment is to **reduce Depreciation – Roaster and Accumulated Depreciation – Roaster by \$2 700**, which lifts the year’s net profit by \$2 700 and restores the roaster’s carrying amount to the correct \$15 100.

Question 5

- a. Each asset is reported at cost less its accumulated depreciation: machinery $\$70\,000 - \$28\,000 = \$42\,000$; motor vehicle $\$36\,000 - \$21\,600 = \$14\,400$; office equipment $\$12\,000 - \$4\,800 = \$7\,200$.

Balance Sheet (extract) as
at 30 June 2026

	\$	\$
Non-Current Assets		
Machinery (at cost)	70 000	
less Accumulated Depreciation – Machinery	28 000	42 000
Motor vehicle (at cost)	36 000	
less Accumulated Depreciation – Motor vehicle	21 600	14 400
Office equipment (at cost)	12 000	
less Accumulated Depreciation – Office equipment	4 800	7 200
Total Non-Current Assets		63 600

- b. Total carrying amount of the non-current assets = $\$42\,000 + \$14\,400 + \$7\,200 = \mathbf{\$63\,600}$.

Question 6

- a. Straight-line = $(\text{cost} - \text{residual}) \div \text{life}$, so $\$5\,000 = (\$34\,000 - \text{residual}) \div 6$. Therefore $\$34\,000 - \text{residual} = \$5\,000 \times 6 = \$30\,000$, giving a residual value of **\$4 000**.
- b. The reducing-balance rate applies to the carrying amount, which at the start of year 1 is the full cost, so rate = $\text{year-1 depreciation} \div \text{cost} = \$10\,000 \div \$40\,000 = \mathbf{25\%}$. Carrying amount at the end of year 1 = $\$40\,000 - \$10\,000 = \$30\,000$, so year-2 depreciation = $25\% \times \$30\,000 = \mathbf{\$7\,500}$.

Question 7

- a. **Depreciation** is the allocation of the cost of a non-current asset (less its estimated residual value) over its useful life — spreading the asset’s cost, as an expense, across the periods in which it is used to help earn revenue.
- b. The carrying amount is simply **cost less accumulated depreciation** — the portion of the asset’s cost **not yet allocated to expense**. It is calculated from **estimates** of useful life and residual value and the chosen

depreciation method, not from any assessment of what the asset is worth; because it is a product of **cost allocation, not valuation**, and takes no account of market conditions, the asset's physical condition or newer models, it will rarely equal the amount for which the asset could be sold.

- c. The **accrual basis** — an expense is recognised in the period in which the benefit of the asset is consumed, not when cash is paid or the asset is sold. (The **period assumption** and **faithful representation** also support charging depreciation each period.)