

Analysis and communication of accounting information

A2

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Read first: [Analysis and communication of accounting information](#), [Preparation of financial statements](#)

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What you need to know

This is the A Level half of the topic. The AS note (under "Read first") already teaches profit margins, ROCE, the current and acid test ratios, the three "days" ratios and non-current asset turnover, and Paper 3 assumes you know all of them. By the end of this topic you should also be able to:

1. **Calculate the A Level ratios with the syllabus formulas**, which are the only ones accepted and are **not** printed on the paper:
 - solvency: the working capital cycle (in days), net working assets to revenue, interest cover and the gearing ratio;
 - investment (stock exchange) ratios: earnings per share, price/earnings, dividend per share, dividend yield and dividend cover.
2. **Analyse and evaluate the results**: say whether a ratio is good or bad, why it has changed and what it means for the business, comparing it with last year, a rival or an industry average.
3. **Make recommendations to stakeholders** (shareholders, potential investors, lenders, directors) from your analysis, with reasons on both sides and a clear decision.
4. **Explain how ratios are linked**, so that one decision (a loan, a share issue, a bigger dividend, less inventory) moves several ratios at once.
5. **Use all of this to make business decisions**, such as how to finance an expansion, whether to pay a dividend or whether to buy a company's shares.

Understand it

Where this topic sits

Every question on this topic is a 25-mark Paper 3 question built on a source in the insert: a set of financial statements or extracts, plus "Additional information" in the question. A typical question asks you to rebuild a missing figure, calculate three to five ratios to two decimal places, then comment, compare and advise. The AS ratios (especially ROCE and the days ratios) turn up inside these questions, so keep the AS note to hand.

A company to work with

Harbour plc's figures for the year ended 31 December 2025 are used all through this section.

Harbour plc	\$
Revenue (all on credit)	1 460 000
Cost of sales (opening inventory 110 000 + purchases 750 000, all on credit – closing inventory 130 000)	730 000
Profit from operations	280 000
Finance costs (8% debentures of \$500 000)	40 000
Profit for the year	240 000
Ordinary share capital (800 000 shares of \$0.50)	400 000
Share premium	100 000
Retained earnings	700 000
8% debentures (2032)	500 000
Trade receivables / trade payables at 31 December	180 000 / 90 000
Dividends: interim paid \$0.05 a share; final proposed \$0.10 a share	
Market price of one share at 31 December	\$3.60

The working capital cycle

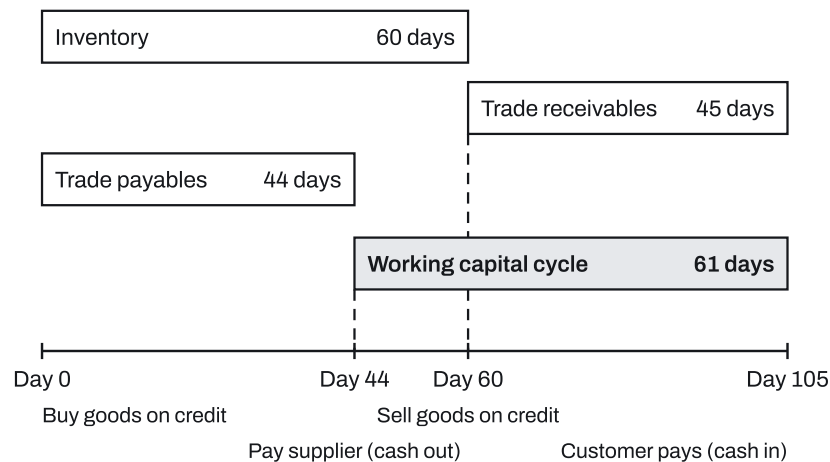
A business buys goods on credit, holds them until they sell, sells them on credit, and then waits for its customers to pay. Meanwhile it has to pay its own suppliers. The **working capital cycle** is the number of days between **paying suppliers** and **receiving cash from customers**: how long cash is tied up in working capital before it comes back.

$$\text{Working capital cycle} = \text{inventory days} + \text{trade receivables days} - \text{trade payables days}$$

The three parts are the AS "days" ratios. For Harbour:

- inventory: average inventory = $(110\,000 + 130\,000) \div 2 = 120\,000$, and $120\,000 \div 730\,000 \times 365 = 60$ days;
- trade receivables: $180\,000 \div 1\,460\,000 \times 365 = 45$ days;
- trade payables: $90\,000 \div 750\,000 \times 365 = 43.8$, rounded **up** to 44 days.

$$\text{Working capital cycle} = 60 + 45 - 44 = 61 \text{ days.}$$



Shorter is usually better: less cash is tied up, so less has to be borrowed (an overdraft costs interest) and the business is more solvent. A cycle gets shorter when inventory is sold faster, customers pay sooner or suppliers are paid later. Each of those has a cost: too little inventory loses sales, tight credit loses customers, and paying suppliers late damages the relationship and loses cash discounts. A cycle can even be negative, as in a supermarket that sells for cash within days but pays its suppliers after a month.

A **retailer** usually has a shorter cycle than a **manufacturer**: the manufacturer first buys raw materials and must make the goods before it can sell them, so its inventory days are far longer.

Net working assets to revenue

$$\text{Net working assets to revenue} = \frac{\text{inventories} + \text{trade receivables} - \text{trade payables}}{\text{revenue}} \times 100$$

Harbour: $(130\,000 + 180\,000 - 90\,000) \div 1\,460\,000 \times 100 = 220\,000 \div 1\,460\,000 \times 100 = 15.07\%$. Every \$100 of sales needs about \$15 tied up in working assets. **Lower means more efficient** (the same sales from less working capital), for the same reasons as a shorter cycle. Use the year-end (closing) inventory unless the question says otherwise. If net working assets grew during the year, an average would be lower than the closing figure, so the ratio would fall and the business would look more efficient, although nothing real has changed.

Gearing

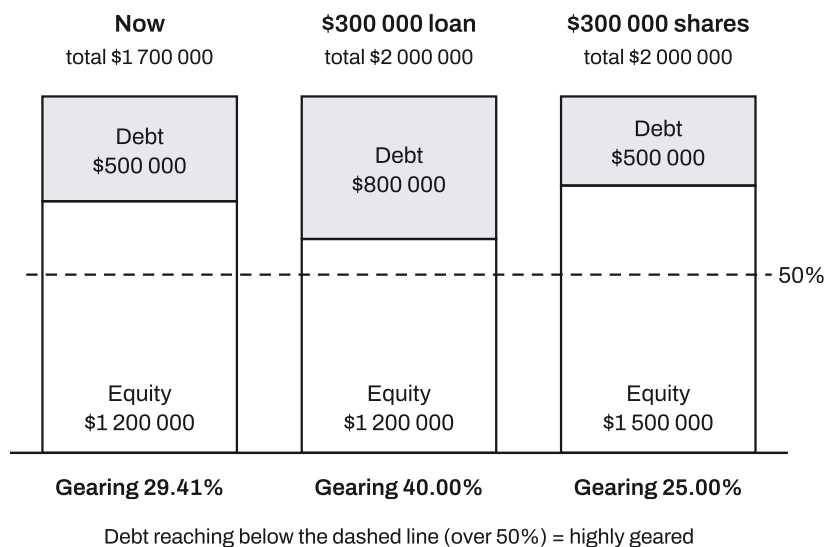
Capital employed comes from two places: shareholders (share capital and **all** reserves) and long-term lenders (debentures and long-term loans: the non-current liabilities).

$$\text{Gearing} = \frac{\text{non-current liabilities}}{\text{issued ordinary share capital} + \text{all reserves} + \text{non-current liabilities}} \times 100$$

Harbour: $500\,000 \div (400\,000 + 100\,000 + 700\,000 + 500\,000) \times 100 = 500\,000 \div 1\,700\,000 \times 100 = 29.41\%$.

Current liabilities, including a bank overdraft, are **not** in the ratio. Above 50% a company is **highly geared**; below it, **low geared**.

- **High gearing is riskier.** Interest must be paid whether or not there is a profit, loans must be repaid and lenders often want security. If profit falls, little is left for shareholders, and the company may struggle to borrow more.
- **But borrowing can help shareholders.** If borrowed money earns more than its interest rate, the extra profit all goes to the shareholders, so earnings per share rise, and no control is given away.



The diagram shows why the way money is raised matters: raising \$300 000 with a loan pushes Harbour's gearing up to $800\,000 \div 2\,000\,000 \times 100 = 40\%$, while issuing shares for it brings gearing down to $500\,000 \div 2\,000\,000 \times 100 = 25\%$.

Interest cover

$$\text{Interest cover} = \frac{\text{profit from operations}}{\text{interest payable}} \text{ times}$$

Harbour: $280\,000 \div 40\,000 = 7$ times, so profit before interest could fall to a seventh of its level before the interest could not be paid. Interest cover is the income-statement view of gearing: more borrowing means more interest and a lower cover. If you are only given the profit for the year, **add the interest back** first. For a debenture issued part-way through the year, charge interest only for the months it was in issue.

Investment ratios

These are the ratios shareholders and potential investors look at. They use the **number** of shares, not the value of share capital: Harbour has $400\,000 \div 0.50 = 800\,000$ shares.

Ratio	Harbour	What it tells an investor
Earnings per share (EPS) = $\frac{\text{profit for the year}}{\text{number of issued ordinary shares}}$	$240\,000 \div 800\,000 = \0.30	Profit earned for each share, whether paid out or kept

Ratio	Harbour	What it tells an investor
Price/earnings (P/E) = $\frac{\text{market price per share}}{\text{EPS}}$	$3.60 \div 0.30 = 12$	How many years of today's earnings the market pays for a share. Higher means more confidence in future growth (or a share that may be overvalued)
Dividend per share (DPS) = $\frac{\text{annual ordinary dividend}}{\text{number of issued ordinary shares}}$	$0.05 + 0.10 = \$0.15$	Cash income for each share. The annual dividend is this year's interim paid plus this year's final proposed
Dividend yield = $\frac{\text{DPS}}{\text{market price per share}} \times 100$	$0.15 \div 3.60 \times 100 = 4.17\%$	The income return on the money an investor would pay for a share today
Dividend cover = $\frac{\text{profit for the year available for ordinary dividend}}{\text{annual ordinary dividend}}$	$240\,000 \div 120\,000 = 2$ times	How many times the profit could pay the dividend. Higher means a safer dividend and more profit kept for growth

Different investors want different things. One who needs **income** now looks for a high dividend yield and a dividend cover high enough to make the dividend safe. One who wants **growth** accepts low dividends (a high cover, with profit ploughed back) and looks for a rising EPS and P/E, hoping for a capital gain when the shares are sold.

How the ratios are linked

The syllabus asks for the links between ratios. The main ones:

- $\text{EPS} = \text{DPS} \times \text{dividend cover}$ and $\text{market price} = \text{P/E} \times \text{EPS}$. Together these give

$$\text{dividend yield} = \frac{100}{\text{dividend cover} \times \text{P/E}} \text{ (in \%)}.$$
For Harbour, $100 \div (2 \times 12) = 4.17\%$.

- **A loan** raises gearing and interest, so interest cover falls; it also cuts the profit for the year, so EPS and dividend cover fall **unless** the new assets earn more than the interest.
- **A share issue** lowers gearing, but spreads the profit over more shares: EPS and DPS can fall even when profit rises (dilution). A **bonus issue** adds shares but no profit, so EPS falls.
- **Retaining profit** (lower dividends) raises dividend cover, lowers the yield and, by adding to reserves, lowers gearing.
- **A rise in the share price** raises P/E and lowers the dividend yield, with no change in the business itself.
- **Less inventory** shortens the cycle **and** lowers net working assets to revenue, but it also lowers the current ratio.

Using ratios well, and their limits

A ratio on its own means little. It becomes useful when **compared**: with previous years (the trend), with another company in the same industry, or with the industry average. Ratios help investors decide whether to buy, hold or sell shares, lenders whether to lend, and directors where the problems are.

Their limits are just as examinable:

- they use **past** figures, and accounts may be published many months after the year end, so things may already have changed;
- many assets are at **historical cost**, not today's value;
- the statement of financial position shows **one day**, which may not be typical;
- companies use **different accounting policies** (depreciation, inventory valuation), and a company in a **different industry** is not a fair comparison;
- ratios show **what** happened, not **why**;
- only **money** is measured: staff skills, reputation, the environment and the economy are left out;
- figures may be **unreliable**, for example when the auditor's report is qualified.

Key facts and formulas

No ratio formulas are printed in the 9706 exam, so every formula here is **Learn it**. Use exactly these forms: another formula scores nothing, although its answer is still followed through as your own figure.

Formula	Status
Working capital cycle = trade receivables days + inventory days – trade payables days	Learn it
Inventory days = $\frac{\text{average inventory}}{\text{cost of sales}} \times 365$; receivables days = $\frac{\text{trade receivables}}{\text{credit sales}} \times 365$; payables days = $\frac{\text{trade payables}}{\text{credit purchases}} \times 365$	Learn it
Net working assets to revenue = $\frac{\text{net working assets}}{\text{revenue}} \times 100$, where net working assets = inventories + trade receivables – trade payables	Learn it

Formula	Status
Interest cover = $\frac{\text{profit from operations}}{\text{interest payable}}$ times	Learn it
Gearing = $\frac{\text{non-current liabilities}}{\text{issued ordinary share capital} + \text{all reserves} + \text{non-current liabilities}} \times 100$	Learn it
Earnings per share = $\frac{\text{profit for the year}}{\text{number of issued ordinary shares}}$	Learn it
Price/earnings = $\frac{\text{market price per share}}{\text{earnings per share}}$	Learn it
Dividend per share = $\frac{\text{annual ordinary dividend}}{\text{number of issued ordinary shares}}$; annual ordinary dividend = interim paid + final proposed	Learn it
Dividend yield = $\frac{\text{dividend per share}}{\text{market price per share}} \times 100$	Learn it
Dividend cover = $\frac{\text{profit for the year available to pay ordinary dividend}}{\text{annual ordinary dividend}}$ times	Learn it
Number of shares = $\frac{\text{ordinary share capital}}{\text{par value of one share}}$	Learn it
Profit from operations = profit for the year + interest	Learn it

Use year-end balances unless the question asks for averages (inventory days always uses average inventory). Give each ratio to the decimal places asked, with its unit: \$ for EPS and DPS, % for gearing, dividend yield and net working assets to revenue, "times" for the covers, days for the cycle, and a plain number for P/E.

How to do it

In the Paper 3 questions we have tagged for this topic (27 questions, 2021–2025, 22 different ones because some are shared between variants), the types came up this often. Every one of the 27 questions mixes several types, so the counts add up to far more than 27.

Question type	Questions
Calculate investment ratios (EPS, DPS, P/E, dividend yield, dividend cover)	19
Interpret and compare investment and gearing ratios	16
Calculate gearing, interest cover or income gearing	16
Uses and limitations of ratio analysis; name a ratio	12
Work backwards from a ratio, or rebuild the figures a ratio needs	11

Question type	Questions
Supporting AS ratios (ROCE, profit margin, non-current asset turnover)	11
Explain, interpret and advise on the working capital cycle and net working assets to revenue	10
Calculate the working capital cycle and net working assets to revenue	9
Financing options: forecast ratios, then evaluate a loan against a share issue	7
Actions that would reduce gearing	2

1. Calculate investment ratios (19 questions)

1. **Count the shares:** share capital ÷ par value. Watch for par values of \$0.50, \$0.25 or \$2, and for a bonus or rights issue in the year (use the number at the year end).
2. **Find the profit for the year.** If it isn't given, rebuild it: closing retained earnings – opening retained earnings + dividends paid in the year (+ any transfer to a general reserve).
3. **Find the annual ordinary dividend:** this year's interim paid + this year's final proposed. Last year's final dividend, paid this year, is **not** part of it.
4. Write each formula with the figures in, then the answer to 2 d.p. with its unit.

Variants:

- **State the formula** as well as the value, sometimes for two years side by side.
- **Two or three companies** at once: work each one the same way.
- **An adjusted profit** (a correction, amortisation of development costs, an error found later): adjust the profit first, then recalculate EPS and P/E, and give the change.
- **Dividends described, not given:** "10% more than last year's final dividend" means multiply first, then add the interim.

2. Interpret and compare investment and gearing ratios (16 questions)

For each ratio, write a chain of points; each one earns a mark:

1. **Quote the figures:** "P/E rose from 8.40 to 11.25", or "gearing of 12.40% is below the industry average of 30%".
2. **Say the direction:** better or worse, higher or lower risk.
3. **Say what it means:** investors are more confident; the company is low geared, so low risk.
4. **Give a reason or consequence:** the share price rose faster than earnings; more profit is left for dividends; it could borrow more easily.

Variants:

- **Why EPS or DPS fell although profit or dividends rose:** new shares were issued, so the total is spread over more shares.

- **Which investor would choose this company:** a low dividend with a high cover suits a long-term investor wanting a capital gain; a high yield suits one who needs income now.
- **An investor's objectives** (a maximum level of risk, a target income, a gain on sale): take each objective in turn, compare the figure with the target and conclude on each.
- **Why directors want a higher dividend cover:** to keep more profit for expansion and future profit, and so the dividend can be kept up if profit falls.
- **Whether to pay a final dividend:** for, shareholders expect one and it supports the share price; against, cash may be short or the business may need the money to grow.

3. Calculate gearing, interest cover or income gearing (16 questions)

1. **Gearing:** add up equity: share capital + share premium + **every** reserve (retained earnings, general reserve, revaluation reserve). Add the non-current liabilities, then divide. Leave out the bank overdraft and all current liabilities; a loan repayable within 12 months has moved to current liabilities.
2. **Interest cover:** profit from operations ÷ interest. If you only have the profit for the year, add the interest back. Work out interest as rate × amount × months in issue ÷ 12.

Variants:

- **Gearing on two dates**, often before and after a new loan: the new loan goes in the numerator **and** the denominator.
- **Income gearing** = $\frac{\text{interest}}{\text{profit from operations}} \times 100$ was asked in 2021 and 2022. It is not in the 2026–2028 list of ratios; it is interest cover turned upside down, so an income gearing of 25% means an interest cover of 4 times.
- **The largest loan within a limit** (such as a maximum income gearing or a minimum interest cover): find the maximum total interest the limit allows, subtract the interest already payable, and divide by the new loan's interest rate.

4. Uses and limitations of ratio analysis; name a ratio (12 questions)

- **Uses:** the trend over several years; comparison with a rival or the industry average; finding problem areas; helping investors and lenders decide. For "explain", add why each helps.
- **Limitations:** the list at the end of "Understand it". Each point earns one mark, so "state three" needs three **different** points.
- **Name a ratio:** "two other investment ratios" (EPS, P/E, dividend yield); "another solvency ratio affected when gearing changes" (interest cover, because more debt means more interest); "the efficiency ratio an impairment affects" (non-current asset turnover); "ratios that need profit from operations" (ROCE and interest cover).
- **Averages instead of year-end figures:** if a balance rose over the year, the average is lower than the closing figure, so a ratio with it on top falls. Averages reflect a whole year's trading better, but a new formula doesn't change real performance and spoils comparisons with earlier years.

5. Work backwards from a ratio, or rebuild the figures a ratio needs (11 questions)

Rearrange the formula and use the ratio as the missing link:

- Dividend yield and DPS give market price = $\text{DPS} \div \text{yield}$; then P/E gives $\text{EPS} = \text{price} \div \text{P/E}$; then profit = $\text{EPS} \times \text{shares}$.
- A target dividend cover gives the annual dividend = $\text{profit} \div \text{cover}$; then $\text{DPS} = \text{dividend} \div \text{shares}$, and the final $\text{DPS} = \text{DPS} - \text{interim}$.
- A target cycle gives the receivables for d days: $\frac{d}{365} \times \text{credit sales}$; the reduction is the old figure minus this.
- Net assets (total assets – all liabilities) equal total equity, so retained earnings = net assets – share capital – share premium – other reserves. Opening retained earnings = closing – profit for the year + dividends paid.
- Non-current asset turnover (AS) gives non-current assets = $\text{revenue} \div \text{turnover}$.
- Profit from operations = profit for the year + interest. A 15% rise applies to profit from operations; **then** take off the new interest.

Every step earns its own mark and later marks follow your figures, so show each line with a label.

6. Supporting AS ratios (11 questions)

These are taught in the AS note; use the same formulas here. The one that catches people at A Level is **ROCE**, because the question gives the profit for the year and a debenture issued part-way through the year:

$$\text{ROCE} = \frac{\text{profit for the year} + \text{interest}}{\text{share capital} + \text{all reserves} + \text{non-current liabilities}} \times 100$$

Harbour: $(240\,000 + 40\,000) \div 1\,700\,000 \times 100 = 16.47\%$. ROCE and gearing share a denominator (capital employed). A \$200 000 6% debenture issued on 1 April adds $200\,000 \times 6\% \times \frac{9}{12} = \9000 of interest for the year.

7. Explain, interpret and advise on the working capital cycle and net working assets to revenue (10 questions)

- **What it measures:** the time between paying suppliers for goods and receiving the cash for them from customers; a guide to solvency.
- **Why a cycle is longer than a rival's:** it holds inventory longer (too much inventory, slow sales), gives customers longer credit (weak credit control) or pays suppliers faster. For "explain two reasons", name the component and develop it.
- **Should the directors be concerned?** Yes: more money is tied up for longer, so more borrowing and a risk of running short of cash. No: the difference is small, the rival may have different policies or be in a different industry, and non-financial factors (better service, reliable supply) may explain it. Then decide.

- **Should they cut the ratios every year?** Lower ratios show more efficiency, but past a point they bring risk: stock-outs and lost sales, customers lost to rivals with better credit terms, suppliers refusing credit. Recommend a sensible target, not a cut every year.
- **Effect of a change on net working assets to revenue** (no calculation): lower receivables or inventory, or higher payables, make net working assets smaller, so the ratio falls.

8. Calculate the working capital cycle and net working assets to revenue (9 questions)

1. **Get the figures you need.** Cost of sales = revenue $\times$ (100 – margin %) $\div$ 100, or revenue $\times$ 100 $\div$ (100 + mark-up %); purchases = cost of sales + closing inventory – opening inventory; opening inventory = cost of sales + closing inventory – purchases.
2. **Work out each component** with its own formula: average inventory over **cost of sales**, receivables over **credit sales**, payables over **credit purchases**.
3. **Round as the question says**, usually **up** to the next whole day for each component, before combining.
4. Cycle = inventory days + receivables days – payables days.
5. **Net working assets to revenue:** (closing inventory + receivables – payables) $\div$ revenue $\times$ 100.

9. Financing options: forecast ratios, then evaluate a loan against a share issue (7 questions)

1. **New profit from operations** (for example the old one + 15%).
2. **For each option, the new profit for the year:** take off **all** the interest (existing debentures + the new loan).
3. **New dividend:** a loan leaves the number of shares the same; a share issue adds shares, and each new one usually gets the dividend too.
4. **New ratios:** dividend cover = new profit $\div$ new dividend. For gearing, equity rises by the retained profit (profit – dividend) and, for a share issue, by the full cash raised (share capital + share premium); non-current liabilities rise by the loan.
5. **Evaluate**, with up to 2 points each side, then decide:

	Loan or debentures	Share issue
For	No dilution of control; the full amount is certain	Permanent capital, never repaid; dividends are at the directors' choice; gearing falls
Against	Gearing rises; interest must be paid even in a loss; must be repaid; may need security	Dilutes control and EPS; the shares may not all be sold; a bigger dividend bill if DPS is kept

A strong point compares the project's return with the interest rate: a project earning 9.9% financed at 8% leaves extra profit for shareholders.

10. Actions that would reduce gearing (2 questions)

For each action, one mark for the action and one for how it lowers the ratio:

- **Issue new shares** and use the cash to repay loans: equity up, debt down.
- **Retain more profit** (pay lower dividends, or raise profit with more sales or lower costs): reserves rise.
- **Revalue non-current assets upwards**: the revaluation reserve rises.
- **Repay loans** from surplus cash or by selling unused assets: debt falls.
- **Convert loans into shares** by agreement with the lenders.

Worked examples

The bold codes show where marks are earned, as in Cambridge mark schemes. The number is how many marks.

- **M1** method mark: for a correct method, even if the numbers slip.
 - **A1** accuracy mark: for a correct answer; it needs the M mark before it.
 - **B1** mark for a correct result on its own, with no method needed.
-

Example 1

Kite plc's ordinary share capital is \$750 000 in shares of \$0.25 each. Its retained earnings rose from \$410 000 at 1 January 2025 to \$530 000 at 31 December 2025. During 2025 it paid the 2024 final dividend of \$0.03 a share and a 2025 interim dividend of \$0.02 a share. The directors propose a 2025 final dividend of \$0.04 a share. The market price of one share at 31 December 2025 was \$2.40.

(a) Calculate, to two decimal places, the 2025 earnings per share, price/earnings ratio, dividend per share, dividend yield and dividend cover. **[9]**

(b) The industry average P/E ratio is 18. Comment on Kite plc's P/E ratio. **[3]**

(a) Shares: $750\,000 \div 0.25 = 3\,000\,000$. **B1**

Dividends paid in 2025: $(0.03 + 0.02) \times 3\,000\,000 = \$150\,000$. Profit for the year = $530\,000 - 410\,000 + 150\,000 = \$270\,000$. **M1 A1**

- $EPS = 270\,000 \div 3\,000\,000 = \0.09 **A1**
- $P/E = 2.40 \div 0.09 = 26.67$ **M1 A1**
- $DPS = 0.02 + 0.04 = \$0.06$ (the 2024 final belongs to last year) **A1**
- $Dividend\ yield = 0.06 \div 2.40 \times 100 = 2.50\%$ **A1**
- $Dividend\ cover = 270\,000 \div (0.06 \times 3\,000\,000) = 270\,000 \div 180\,000 = 1.50\ times$ **A1**

(b) Kite's P/E of 26.67 is well above the industry average of 18 **(1)**. Investors are paying more for each dollar of earnings, which suggests they are confident of strong future growth **(1)**. It could also mean the share is overvalued, and a new investor gets only a 2.50% yield at this price **(1)**.

Example 2

Dune Limited's revenue for 2025 was \$912 500, all on credit, at a mark-up of 25%. All purchases were on credit. At 1 January 2025 inventory was \$64 000; at 31 December 2025 inventory was \$76 000, trade receivables \$110 000 and trade payables \$81 300.

- (a) Calculate the working capital cycle. Round each component up to the next whole day. **[7]**
- (b) Calculate, to two decimal places, the net working assets to revenue ratio, using closing inventory. **[2]**
- (c) Calculate the value of trade receivables that would cut the working capital cycle by 6 days, with sales unchanged. **[3]**

(a) Cost of sales = $912\,500 \times 100 \div 125 = \$730\,000$. **B1**

Purchases = $730\,000 + 76\,000 - 64\,000 = \$742\,000$. **B1**

- Inventory days: average = $(64\,000 + 76\,000) \div 2 = 70\,000$; $70\,000 \div 730\,000 \times 365 = 35$ days **M1 A1**
- Receivables days: $110\,000 \div 912\,500 \times 365 = 44$ days **A1**
- Payables days: $81\,300 \div 742\,000 \times 365 = 39.99$, so 40 days **A1**

Working capital cycle = $35 + 44 - 40 = 39$ days. **A1**

(b) Net working assets = $76\,000 + 110\,000 - 81\,300 = 104\,700$ **M1**; $104\,700 \div 912\,500 \times 100 = 11.47\%$ **A1**.

(c) Receivables days must fall from 44 to 38. **M1** Receivables = $38 \div 365 \times 912\,500 = \$95\,000$ **M1**, a reduction of $110\,000 - 95\,000 = \$15\,000$ **A1**.

Example 3

Marlow plc has 600 000 ordinary shares of \$1, reserves of \$300 000 and 6% debentures of \$300 000. In 2025 its profit from operations was \$198 000 and it paid a dividend of \$0.15 a share.

On 1 January 2026 it will invest \$400 000 in new equipment, which is expected to raise profit from operations by 20%. The dividend per share will stay at \$0.15. It has two options:

- Option A: a bank loan of \$400 000 at 8% a year;
- Option B: issue 250 000 ordinary shares at \$1.60 each.

(a) For each option, calculate to two decimal places the 2026 dividend cover and the gearing ratio at 31 December 2026. **[10]**

(b) Advise the directors which option to choose. Justify your answer. **[5]**

(a) Profit from operations 2026 = $198\,000 \times 1.2 = \$237\,600$. **B1**

	Option A (loan)	Option B (shares)
Interest	$18\,000 + 32\,000 = 50\,000$ B1	18 000
Profit for the year	$237\,600 - 50\,000 = 187\,600$ M1	$237\,600 - 18\,000 = 219\,600$
Dividend	$600\,000 \times 0.15 = 90\,000$	$850\,000 \times 0.15 = 127\,500$ B1
Dividend cover	$187\,600 \div 90\,000 = 2.08$ times A1	$219\,600 \div 127\,500 = 1.72$ times A1
Equity at 31 December 2026	$900\,000 + 97\,600 = 997\,600$ M1	$900\,000 + 400\,000 + 92\,100 = 1\,392\,100$ M1
Gearing	$\frac{700\,000}{997\,600 + 700\,000} \times 100 = 41.23\%$ A1	$\frac{300\,000}{1\,392\,100 + 300\,000} \times 100 = 17.73\%$ A1

The retained profit is profit – dividend: $187\,600 - 90\,000 = 97\,600$ and $219\,600 - 127\,500 = 92\,100$.

(b) For the loan: the project earns $39\,600 \div 400\,000 \times 100 = 9.9\%$, more than the 8% interest, so shareholders gain, and dividend cover stays higher (2.08 against 1.72) **(1)**; there is no dilution of control **(1)**. Against: gearing rises to 41.23%, close to the 50% "high" level, and interest cover falls from $198\,000 \div 18\,000 = 11$ to $237\,600 \div 50\,000 = 4.75$ times **(1)**; the loan must be repaid and its interest paid even if profits fall, and the bank may want security **(1)**. Decision: take the loan, because the project's return beats the interest rate and gearing stays below 50% **(1)**. (Choosing the shares with a supporting reason also earns the decision mark.)

Common mistakes

- **Using the value of share capital instead of the number of shares.** \$400 000 of \$0.50 shares is 800 000 shares. Examiners have seen EPS worked out on the dollar figure.
- **The wrong dividend in DPS and dividend yield.** The annual dividend is this year's interim paid + this year's final proposed. Last year's final dividend, paid this year, is a common wrong choice.
- **Leaving debt out of the gearing denominator, or putting the overdraft in.** The denominator is equity + non-current liabilities, including any new loan; the overdraft is a current liability. Reports in 2021, 2023 and 2025 all mention this.
- **Forgetting to add interest back** before ROCE or interest cover, or charging a full year's interest on a debenture issued part-way through the year.
- **Rounding the days wrongly.** When the question says "round up", round each component up to the next whole day (43.8 becomes 44) before adding.
- **Missing units and decimal places.** \$ for EPS and DPS, % for gearing and yield, "times" for the covers; two decimal places when asked. Marks are lost for wrong or missing units.
- **Mixing up the years** when explaining a change. Say which year is which and quote both figures.
- **Applying a limit to the wrong figure.** For "the largest loan within the policy", use the policy to find the maximum total interest first, then take off the interest already payable.

- **Forgetting gearing when judging a loan.** Many answers discuss the interest but not the rise in gearing and risk.
- **Comments with no decision, or a decision with no reason.** "Advise" and "assess" need both sides and then a clear, justified choice.

How to get the marks

- **Show the formula with the figures in.** Mark schemes give a mark for the correct formula, then an own-figure mark for the answer. A wrong figure carried from an earlier part still earns the later marks if the method is right, so always finish.
- **Label workings.** "Profit from operations 2026 = 237 600" earns marks on its own; an unlabelled number may not.
- **Accuracy:** give answers to the decimal places asked (usually two) and say "times", "%", "\$" or "days".
- **"Comment", "analyse" and "discuss":** quote the figures, say which is better, explain what it means and give a consequence. Compare with the benchmark the question gives (last year, a rival, the industry average).
- **"Advise", "assess" or "should ... ?":** usually up to 2 marks for points on each side and 1 for a decision supported by a comment. Give two developed points for and two against, then a decision that follows from them.
- **"State"** needs short points; **"explain"** needs a point plus why it matters, often 1 + 1.
- **Use the source.** Points tied to the company's own figures (its gearing, its project's return, its inventory) score better than general points.
- **Formulas:** only the syllabus versions are accepted, so learn them exactly.

Quick check

1. A company has ordinary share capital of \$600 000 in shares of \$0.40 each, a profit for the year of \$255 000 and a market price of \$2.21 a share. Calculate its EPS and P/E ratio.
2. A company with 2 000 000 ordinary shares paid an interim dividend of \$0.04 a share and proposes a final dividend of \$0.08 a share. Its profit for the year is \$480 000 and its share price is \$3.00. Calculate the dividend yield and the dividend cover.
3. A company has share capital \$500 000, share premium \$50 000, retained earnings \$250 000, a revaluation reserve \$100 000, 7% debentures \$300 000 and a bank overdraft \$40 000. Its profit for the year was \$129 000 and the debentures were in issue all year. Calculate its gearing ratio and interest cover to two decimal places.
4. A company's profit for the year is \$300 000 and it has 1 200 000 shares. It paid an interim dividend of \$0.04 a share. The directors want a dividend cover of 2.5 times. Calculate the final dividend per share they should propose.
5. A company's inventory days are 52, trade receivables days 38 and trade payables days 47. Calculate its working capital cycle, and state two ways it could shorten the cycle.

Answers

1. Shares = $600\,000 \div 0.40 = 1\,500\,000$. EPS = $255\,000 \div 1\,500\,000 = \0.17 . P/E = $2.21 \div 0.17 = 13.00$.
2. DPS = $0.04 + 0.08 = \$0.12$, so dividend yield = $0.12 \div 3.00 \times 100 = 4.00\%$. Annual dividend = $0.12 \times 2\,000\,000 = \$240\,000$, so dividend cover = $480\,000 \div 240\,000 = 2.00$ times.
3. Equity = $500\,000 + 50\,000 + 250\,000 + 100\,000 = 900\,000$. Gearing = $300\,000 \div (900\,000 + 300\,000) \times 100 = 25.00\%$ (the overdraft is left out). Interest = $300\,000 \times 7\% = 21\,000$; profit from operations = $129\,000 + 21\,000 = 150\,000$; interest cover = $150\,000 \div 21\,000 = 7.14$ times.
4. Annual dividend = $300\,000 \div 2.5 = \$120\,000$, so DPS = $120\,000 \div 1\,200\,000 = \0.10 . Final dividend = $0.10 - 0.04 = \$0.06$ a share.
5. $52 + 38 - 47 = 43$ days. Any two of: sell inventory faster or hold less of it; collect from customers sooner (tighter credit control, cash discounts); take longer to pay suppliers (without harming the relationship).

Past questions to try

- **9706/31/O/N/22 Q3:** EPS, DPS, P/E and dividend yield over two years, then why they changed after a share issue.
- **9706/32/M/J/22 Q3:** P/E, yield, gearing and ROCE, then advise on shares against debentures.
- **9706/33/M/J/24 Q2:** a working capital cycle that needs revenue and purchases rebuilt, plus P/E, yield and interest cover.
- **9706/33/O/N/21 Q2:** the largest loan within an interest limit, then retained earnings and gearing after the loan.