

Cambridge IGCSE · Accounting 0452 · Notes

Interpretation of accounting ratios

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Read first: [Calculation and understanding of accounting ratios](#), [Valuation of inventory](#)

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What you need to know

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

1. **Compare results between years.** Set out a simple statement of a business's ratios for two (or more) years side by side, say whether each one has **improved or worsened**, and suggest why.
2. **Recommend improvements.** Suggest practical ways to raise profitability (gross margin, profit margin, ROCE) and to strengthen working capital and liquidity (current ratio, liquid ratio, the turnover periods), and advise on a proposed course of action with points for and against.
3. **Read the gap between gross margin and profit margin.** Understand that the difference between the two shows how much of the revenue is used up by expenses, and so how efficiently the business controls its running costs.
4. **Explain what drives gross profit and profit for the year:** how they are linked to the valuation of inventory, the rate of inventory turnover, revenue, expenses and the owner's equity (capital).

Calculating the eight ratios is in the previous topic, calculation and understanding of accounting ratios; read that first. Comparing with other businesses in more depth, and the limitations of doing so, have their own topics.

Understand it

A ratio on its own says little

A gross margin of 38% is neither good nor bad by itself. It becomes useful when you compare it with something:

- **the same business last year** (is it getting better or worse?);
- **a similar business** (is it doing better or worse than its rivals?);
- **a target or a benchmark**, such as the credit terms the business allows (30 days) or a liquid ratio of about 1 : 1.

So interpreting ratios always means three steps: **compare** (up or down?), **judge** (is that better or worse for this business?), and **explain** (what could have caused it, and what should be done?).

"Up" is not always "better". A higher trade receivables turnover (more days) is **worse**: customers are taking longer to pay. A current ratio that climbs very high may mean money is lying idle. Always say which way is better for the ratio you are discussing.

Preparing a comparison statement

Suppose a trader's results for two years are:

	Year 1	Year 2
Revenue	\$100 000	\$120 000
Cost of sales	\$60 000	\$74 400
Gross profit	\$40 000	\$45 600
Expenses	\$25 000	\$34 800
Profit for the year	\$15 000	\$10 800
Average inventory	\$7 500	\$6 200

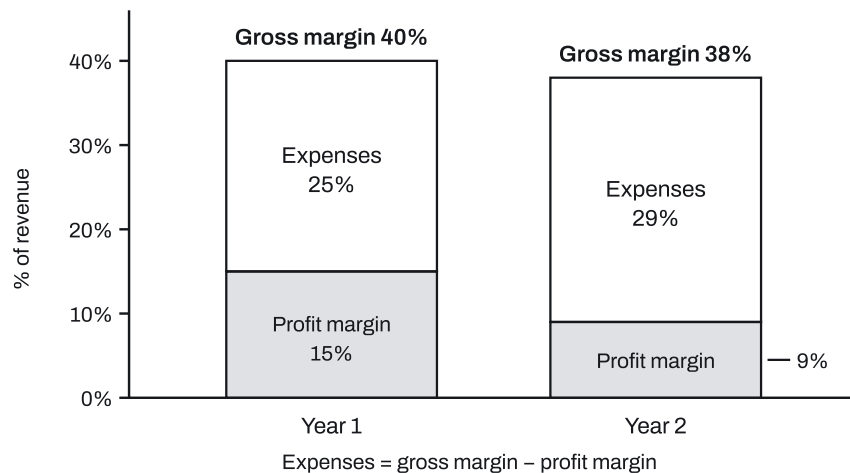
A simple comparison statement puts the ratios in the same order for both years, then the change:

Ratio	Year 1	Year 2	Improved or worsened?
Gross margin	40.00%	38.00%	Worsened
Profit margin	15.00%	9.00%	Worsened
Expenses as % of revenue	25.00%	29.00%	Worsened
Rate of inventory turnover	8.00 times	12.00 times	Improved

The comment then **links** the figures. Revenue rose by 20% and inventory sold much faster, so more goods were sold. But the gross margin fell, so each sale earned a little less: perhaps prices were cut to win the extra sales, or the goods cost more to buy. The profit margin fell much further than the gross margin, because expenses grew faster than revenue. Even though revenue and gross profit rose, profit for the year fell from \$15 000 to \$10 800.

The gap between the two margins

Gross margin minus profit margin is the share of each \$1 of revenue used up by **expenses** (less any other income).



- In Year 1 expenses took 25 cents of every \$1 of sales; in Year 2 they took 29 cents.
- The gross margin fell by only 2 percentage points, but the profit margin fell by 6, because expenses took 4 points more.
- A **gross margin that holds steady (or rises) while the profit margin falls** points at expenses: the business is buying and selling its goods as well as before, but it is not controlling its running costs (wages, rent, advertising, interest).
- A **smaller gap** means better control of expenses. When comparing businesses, the one with the smallest gap controls its overheads most efficiently, whatever its gross margin.

The gross margin depends only on selling prices and the cost of the goods sold (including trade discounts and the mix of goods). It is **not** changed by expenses, nor by how many goods are sold at the same prices. The profit margin depends on everything in the gross margin **and** on expenses and other income.

What drives gross profit and profit for the year

Revenue. More goods sold at the same margin gives more gross profit, even though the gross margin (a percentage) doesn't change. Higher selling prices raise both gross profit and the gross margin, but may cut the number of goods sold.

Rate of inventory turnover. $\text{Cost of sales} = \text{rate of inventory turnover} \times \text{average inventory}$. With average inventory of \$8 000 and a mark-up of 25%, a rate of 10 times gives cost of sales \$80 000 and gross profit \$20 000; a rate of 12 times gives cost of sales \$96 000 and gross profit \$24 000. Selling the same inventory faster earns more gross profit for the same money tied up in goods. A falling rate means goods are selling more slowly: less gross profit, more storage cost, and a risk that goods become damaged or out of date.

Valuation of inventory. Closing inventory is taken off in cost of sales, so its value feeds straight into gross profit. Say opening inventory is \$5 000, purchases \$50 000 and closing inventory really \$6 000. If it is wrongly valued at \$8 000:

- cost of sales is \$47 000 instead of \$49 000, so **gross profit and profit for the year are \$2 000 too high**;

- the extra \$2 000 of profit is added to capital, so **equity is \$2 000 too high**, and so are the current assets and the current ratio;
- next year this \$8 000 is the **opening** inventory, so next year's cost of sales is \$2 000 too high and next year's profit \$2 000 too low.

This is why inventory is valued at the lower of cost and net realisable value (prudence): damaged goods valued at a reduced amount lower the gross profit.

Expenses. Expenses don't affect gross profit, but every extra \$1 of expenses cuts profit for the year by \$1. Other income (rent received, commission) adds to profit for the year.

Equity. Profit for the year is added to the owner's capital; drawings are taken off. A higher profit raises closing capital. For ROCE this works both ways: more profit raises ROCE, but more capital (from profits kept in the business, extra capital introduced or a new loan) lowers it unless profit rises in step.

Working capital and liquidity

Working capital is current assets minus current liabilities. Whether an action changes it depends on **what the other side of the entry is**:

- Swapping one current item for another** changes nothing: collecting a debt (receivables → cash), or buying inventory for cash.
- Short-term borrowing** (a bigger overdraft, a loan repayable in six months) adds the same amount to current assets and current liabilities, so working capital is unchanged, and a current ratio above 1 actually **falls**. With current assets \$16 000 and current liabilities \$10 000 (working capital \$6 000, current ratio 1.60 : 1), borrowing \$3 000 on overdraft gives \$19 000 and \$13 000: working capital still \$6 000, current ratio 1.46 : 1.
- Long-term money** raises working capital: the owner paying in capital, a loan repayable after more than a year, or selling a non-current asset for cash. \$3 000 of new capital gives working capital of \$9 000.
- Paying money into an overdrawn bank account** reduces the overdraft (a current liability) rather than adding a current asset.

The **liquid ratio** leaves out inventory, so buying or selling inventory for cash moves it, but valuing inventory differently does not. A **provision for doubtful debts** is taken off trade receivables, so raising it lowers both the current and the liquid ratio.

Key facts and formulas

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

Formula	Status
Gross margin — profit margin = (expenses — other income) as a % of revenue	Learn it

Formula	Status
Cost of sales = rate of inventory turnover $\times$ average inventory	Learn it
Gross profit = revenue – cost of sales = cost of sales $\times$ mark-up	Learn it
Closing inventory overvalued by \$x: this year's gross profit, profit and capital are \$x too high; next year's profit is \$x too low	Learn it
Closing capital = opening capital + capital introduced + profit for the year – drawings	Learn it
Working capital = current assets – current liabilities	Learn it
Better when higher : gross margin, profit margin, ROCE, rate of inventory turnover	Learn it
Better when shorter : trade receivables turnover (compare with the credit terms allowed)	Learn it
Current and liquid ratios: better when adequate (roughly 2 : 1 and 1 : 1); too low means cash problems, too high means idle money	Learn it

How to do it

We have 51 tagged questions for this topic from 2021 to 2025 (37 different, as many appear on two or three paper variants): 38 one-mark multiple-choice questions from Paper 1 and 13 twenty-mark Paper 2 questions. 12 of the Paper 2 questions mix types (for example, comments followed by advice), so the counts add up to 66.

Question type	Questions
Link a ratio change to its cause or effect (multiple choice)	20
Suggest or choose ways to improve profitability, liquidity or working capital	19
Advise on a decision, with points for and against and a recommendation	13
Comment on ratios compared over years or with another business	8
Use the gap between gross margin and profit margin	6

1. Link a ratio change to its cause or effect (multiple choice) (20 questions)

1. **Write the ratio as a fraction** and ask which figure has moved: the top, the bottom or both.
2. **Test each option** against the fraction. Cross out any option that doesn't touch the ratio at all (expenses never change the gross margin; inventory never changes the liquid ratio).

3. For a two-part question, **work out each ratio separately**, then find the row with both.

Variations you will meet:

- **Gross margin rose or fell.** It rises with higher selling prices, cheaper purchases or more trade discount **received**; it falls with lower selling prices or dearer purchases. Selling more goods at the same prices, or changing expenses, does **not** change it.
- **Figures given for two years** (units sold and revenue): divide to find the selling price per unit. If 2 000 units earned \$18 000 then \$21 000, the price rose from \$9 to \$10.50.
- **Inventory turnover given in days** (a rarer form): **more** days means goods sell **more slowly**. Given in times, a **lower** number means more slowly, which suggests falling demand or too much inventory bought.
- **Liquid ratio fell:** fewer liquid assets (trade receivables or cash went down) or more current liabilities (overdraft or trade payables went up). A change in inventory has no effect.
- **Profit margin up but ROCE down:** profit rose, but capital employed rose even faster, for example because the owner introduced capital or took out a long-term loan.
- **Effect of an action on two ratios.** A long-term loan used to pay suppliers early: trade payables fall, so payables days **decrease**; capital employed rises with no extra profit, so ROCE **decreases**. Holding less inventory to cut storage costs: expenses fall, so profit **increases**; average inventory falls, so the rate of inventory turnover **increases**.
- **What a ratio tells you.** Receivables days of 42 when customers are allowed 30 means customers are paying late, it takes 42 days on average to be paid, and the business would find it easier to pay its own suppliers if customers paid on time. It does **not** show efficient credit control.
- **Why take longer to pay suppliers?** It keeps cash available for other uses. It doesn't change the total working capital (cash and trade payables both stay higher), and it loses cash discounts rather than earning them.

2. Suggest or choose ways to improve profitability, liquidity or working capital (19 questions)

On Paper 2, "suggest two ways" is usually 2 marks, one per different, **specific** action linked to the ratio asked about. "Increase sales" does not improve a gross margin; "reduce cost of sales" earns nothing unless you say how.

To improve	Suggest
Gross margin	Raise selling prices; find a cheaper supplier; buy in bulk for more trade discount; sell more of the goods that earn the highest margin; allow customers less trade discount
Profit margin	Improve the gross margin (above); cut expenses (wages, rent, advertising, interest); earn more other income (commission, rent received)
ROCE	Raise profit (cut expenses, raise the margin, sell more); reduce capital employed (repay a long-term loan, withdraw capital that isn't needed, take more drawings)
Rate of inventory turnover	Sell more (advertising, special offers, lower prices, clearance sales of old lines); hold less inventory (buy smaller amounts more often, "just in time")

To improve	Suggest
Trade receivables turnover	Check customers before giving credit; send invoices and monthly statements promptly; offer cash discount for early payment; charge interest on overdue accounts; stop credit to slow payers
Working capital and the current ratio	The owner pays in more capital; take a long-term loan instead of an overdraft; sell surplus non-current assets; take less in drawings
Liquid ratio	Sell surplus inventory for cash; collect debts faster; reduce the overdraft

Multiple choice versions:

- **Which options improve working capital?** Only long-term money does: capital from the owner, a long-term loan, the sale of a non-current asset. A higher overdraft limit or a six-month loan doesn't.
- **Which action gives the biggest increase in profit?** Work out the change in profit for each option. Suppose profit is \$12 000. (A) commission raising profit by 10%: +\$1 200. (B) \$1 200 more advertising raising gross profit by \$3 000: +\$1 800. (C) higher prices raising gross profit by \$1 500: +\$1 500. (D) cutting wages by \$600 and earning rent of \$1 000: +\$1 600. The answer is B. Remember to take any extra cost off.
- **How much capital to reach a target current ratio?** If there is an **overdraft**, the money paid in reduces it. Current assets \$9 000 (no cash), trade payables \$2 500, overdraft \$3 500: for 2 : 1, current liabilities must be $9\,000 \div 2 = 4\,500$, so the owner pays in \$1 500.
- **Which change raises the liquid ratio?** Anything that raises liquid assets or lowers current liabilities: for example, **reducing** the provision for doubtful debts.
- **Which ratio does sending monthly statements improve?** Trade receivables turnover.

3. Advise on a decision, with points for and against and a recommendation (13 questions)

Paper 2, 5 marks: usually up to 3 marks for points on one side, up to 3 on the other (4 in total), and **1 for a clear recommendation**.

1. **List points for** the proposal, each tied to this business's situation.
2. **List points against**. Give at least one on each side, or the recommendation mark can't be earned.
3. **Recommend**: "Rushil should ... because ...". "It depends" or "if he chooses to ..." is not a recommendation.

Points that often apply:

Proposal	For	Against
Offer cash discount for early payment	Money comes in sooner (better cash flow and liquidity); fewer irrecoverable debts; may win customers' loyalty and more sales	Discount is an expense, lowering profit and the profit margin; less cash from each sale; customers may take the discount but still pay late; more book-keeping

Proposal	For	Against
Delay paying suppliers (credit purchases)	Keeps cash in the business; free short-term finance with no interest or security	Lost cash discounts; suppliers may charge interest, refuse credit or stop supplying; damages the relationship
Owner pays in more capital to clear an overdraft	No overdraft interest; better working capital; may improve the relationship with the bank; funds the business until customers pay faster	More of the owner's money at risk; ROCE falls; hurts the owner's personal finances; capital is not usually used for a short-term problem
Long-term bank loan (to expand or to clear an overdraft)	Money for growth, which may raise profit; the overdraft (a current liability) is replaced by a non-current one, so working capital improves; time to repay	Interest every year lowers profit; must be repaid; the bank may want security; assets at risk if repayments are missed; ROCE falls unless profit rises
Reduce selling prices	More sales; faster inventory turnover; less risk of goods becoming damaged or out of date; lower storage costs	Lower gross margin; less cash per item; customers may doubt quality or expect low prices in future
Longer credit for customers, or use a debt collection agency	Longer credit may attract more credit sales; an agency collects faster and frees the owner's time	Longer credit means slower cash and more irrecoverable debts; the agency charges fees and may upset customers
Buy a large amount of inventory at a reduced price, or buy more to earn extra trade discount	Higher gross margin; less risk of running out	Cash tied up; storage and insurance costs; goods may deteriorate or go out of fashion; slower inventory turnover
Spend more on staff or marketing (a marketing manager)	May increase sales and gross profit	A fixed extra expense; sales may not rise enough to cover it; profit margin falls if not
Raise finance by debentures or by shares	Debentures: no loss of control, fixed interest. Shares: no interest or repayment, dividends only if profits allow	Debentures: interest must be paid every year and repaid. Shares: control shared with new shareholders; shareholders expect dividends

4. Comment on ratios compared over years or with another business (8 questions)

1. **Read which figures belong to which year** (or business). Examiners often find candidates treating last year's figures as this year's.
2. **For each ratio say "improved" or "worsened"**, not just "increased" or "decreased".
3. **Give a reason** that fits that ratio's direction (table below), and use the business's own figures.
4. **Link ratios together** where you can: a higher gross margin with a lower profit margin points at expenses; faster inventory turnover with a lower gross margin suggests price cuts.

Ratio	Improved because	Worsened because
Gross margin	Higher selling prices; cheaper purchases; more trade discount received; a change to higher-margin goods	Lower selling prices; dearer purchases; less trade discount received
Profit margin	Lower expenses; more other income; expenses a smaller share of revenue; more sales with expenses held steady	Higher expenses; less other income; expenses a larger share of revenue; fewer sales
ROCE	Profit rose; capital employed fell (loan repaid, capital withdrawn)	Profit fell; extra capital or a new loan not yet earning profit
Rate of inventory turnover	Higher demand; lower selling prices boosting sales; less inventory bought	Lower demand; higher prices; too much inventory bought
Current and liquid ratios	More trade receivables or cash; fewer trade payables or a smaller overdraft	Fewer receivables or less cash; more trade payables or a bigger overdraft
Trade receivables turnover	Better credit control; cash discount offered; fewer slow customers	Weak credit control; longer credit allowed to win sales; more slow payers
Trade payables turnover	Longer is better for cash: the business keeps its money longer	But paying too slowly loses cash discounts and supplier goodwill

Variations you will meet:

- **Two businesses** (a new trader against an established rival): a new business may have to give longer credit to attract customers, and suppliers may give it shorter credit because it has no track record. Name which business each point is about.
- **"Explain why she should not be entirely pleased"**: find the ratio that got worse behind the good news. Lower prices sold goods faster, but the lower gross margin means less gross profit on each sale, and extra advertising lowers the profit margin.
- **"State why he should be concerned about a falling profit margin"**: if expenses keep growing faster than sales, the business may make a loss and be unable to pay its expenses and suppliers.
- **Link a slow receivables turnover to a lower profit margin**: more debts become irrecoverable and the provision for doubtful debts may rise (both expenses); short of cash, the business may pay suppliers late and lose cash discount or be charged interest, or pay more overdraft interest.
- **Gross margin rose although selling prices didn't change**: purchases must have been cheaper (a new supplier, more trade discount), or the mix of goods sold changed.

5. Use the gap between gross margin and profit margin (6 questions)

1. For each year or business, **subtract**: gross margin — profit margin = expenses as a % of revenue.
2. **The smallest gap controls expenses best**. Business X (gross margin 42%, profit margin 12%) spends 30% of revenue on expenses; Business Y (34%, 13%) spends 21%, so Y controls its overheads better even though X has the higher gross margin.

3. **With revenue fixed**, turn the percentages into amounts to see which way cost of sales and expenses moved. Revenue \$100 000, gross margin 45% → 40%: cost of sales rose from \$55 000 to \$60 000. Profit margin 5% → 3%: expenses went from \$40 000 to \$37 000, so they fell.
4. **Gross margin unchanged, profit margin up, gross profit up**: more goods sold at the same prices, and expenses fell as a share of revenue.

Worked examples

Example 1

A trader's revenue was \$90 000 in each of two years. Her gross margin was 30% in both years, but her profit margin fell from 12% to 8%. She has no other income.

What explains the change? [1]

A The cost of her purchases increased. B Her expenses increased. C She reduced her selling prices. D She received more trade discount from suppliers.

A, C and D would all change the gross margin, which stayed at 30%. Gross profit was \$27 000 in both years; profit fell from \$10 800 to \$7 200, so expenses rose from \$16 200 to \$19 800. **B (1)**

Example 2

A business has inventory \$12 000, trade receivables \$9 000, cash at bank \$3 000 and trade payables \$10 000. It pays \$2 000 of its trade payables by bank transfer.

What happens to its current ratio and its liquid (acid test) ratio? [1]

	current ratio	liquid ratio
A	increases	increases
B	increases	no change
C	no change	decreases
D	decreases	decreases

Before: $24\,000 : 10\,000 = 2.40 : 1$ and $12\,000 : 10\,000 = 1.20 : 1$. After: $22\,000 : 8\,000 = 2.75 : 1$ and $10\,000 : 8\,000 = 1.25 : 1$. **A (1)**

Both sides fall by the same amount, which raises any ratio that was above 1 : 1.

Example 3

Kofi is a trader. He provided the following information.

	2024	2025
Revenue	\$150 000	\$160 000
Cost of sales	\$97 500	\$100 800
Expenses	\$33 000	\$41 600
Inventory at the start of the year	\$7 800	\$8 450
Inventory at the end of the year	\$8 450	\$12 550

(a) Prepare a statement comparing Kofi's gross margin, profit margin and rate of inventory turnover for the two years, each to two decimal places. [6]

(b) Comment on the change in each ratio, giving one possible reason for each change. [6]

(c) Suggest **two** ways Kofi could improve his profit margin. [2]

(a) Gross profit: \$52 500 and \$59 200 (1). Profit for the year: \$19 500 and \$17 600 (1) **OF**. Average inventory: \$8 125 and \$10 500 (1).

Ratio	2024	2025
Gross margin	$\frac{52\,500}{150\,000} \times 100 = 35.00\%$	$\frac{59\,200}{160\,000} \times 100 = 37.00\%$ (1) OF
Profit margin	$\frac{19\,500}{150\,000} \times 100 = 13.00\%$	$\frac{17\,600}{160\,000} \times 100 = 11.00\%$ (1) OF
Rate of inventory turnover	$\frac{97\,500}{8\,125} = 12.00$ times	$\frac{100\,800}{10\,500} = 9.60$ times (1) OF

(b)

- **Gross margin improved** from 35.00% to 37.00% (1): Kofi may have raised his selling prices or found a cheaper supplier (1).
- **Profit margin worsened** from 13.00% to 11.00% (1): expenses rose from 22% to 26% of revenue, faster than sales, so they were not well controlled (1).
- **Rate of inventory turnover worsened** from 12.00 to 9.60 times (1): closing inventory rose by \$4 100, so he bought more than he could sell, or higher prices slowed sales (1).

(c) Any two, each specific: reduce expenses such as wages or advertising (1); keep the higher gross margin by continuing to buy from the cheaper supplier (1); earn other income, for example by renting out spare storage space (1).

Example 4

Priya is a trader. At 31 March 2025 her current assets were inventory \$9 000 and trade receivables \$7 500, with no cash. Her current liabilities were trade payables \$8 000 and a bank overdraft \$7 000.

She is thinking of taking a five-year bank loan of \$7 000 at 8% a year to repay the overdraft.

(a) Calculate her current ratio and liquid (acid test) ratio before and after the loan, to two decimal places. [4]

(b) Advise Priya whether she should take the loan. Justify your answer with points for and against. [5]

(a) Before: current ratio = $16\,500 : 15\,000 = 1.10 : 1$ (1); liquid ratio = $7\,500 : 15\,000 = 0.50 : 1$ (1).

After, the overdraft is gone and the loan is a non-current liability: current ratio = $16\,500 : 8\,000 = 2.06 : 1$ (1); liquid ratio = $7\,500 : 8\,000 = 0.94 : 1$ (1).

(b) For:

- Her working capital rises from \$1 500 to \$8 500 and both ratios improve, so she can pay her suppliers on time and keep their cash discounts (1).
- A bank can ask for an overdraft back at short notice; the loan gives her five years (1).

Against:

- Interest of \$560 a year for five years reduces her profit for the year (1).
- The bank may want security, and her assets are at risk if she can't make the repayments (1).
- It doesn't fix the cause: if customers keep paying slowly she may soon need an overdraft again.

Recommendation: Priya should take the loan, because a liquid ratio of 0.50 : 1 means she cannot pay her debts as they fall due, and the loan gives her time; she should also tighten her credit control (1).

Common mistakes

- **Saying "increased" instead of "improved".** Examiners single this out: many answers say a ratio went up or down but not whether that is better or worse. For each ratio, say whether it is better or worse, then why.
- **Mixing up the years.** Read the headings; the figures given are often last year's, for comparison with the ones you have just worked out.
- **Repeating the figures instead of explaining them.** "Receivables days went from 36 to 42" earns nothing on its own; the marks are for the reason and what it means for the business.
- **General answers.** "Improve efficiency" or "reduce costs" without saying how earns nothing. "Sell more" does not raise a gross margin, because the margin is a percentage.
- **One-sided advice.** In the 5-mark questions many answers give only advantages. Give points on both sides, then a clear recommendation; without one on each side the recommendation mark is lost.
- **No recommendation, or a vague one.** "He should" alone, or "if he decides to ...", is not a recommendation. Say what the business should do and why.
- **Believing any borrowing improves working capital.** A bigger overdraft or a short-term loan adds equally to current assets and current liabilities, so working capital doesn't change.
- **Forgetting the knock-on effects.** Slow-paying customers don't just hurt liquidity: they can cut the profit margin through irrecoverable debts, lost cash discounts and extra interest. Few candidates see the second step.

- **Wandering from the business in the question.** Don't discuss production for a trader, or the benefits of a partnership when the question is about a loan.

How to get the marks

- **"Comment on"**: for each ratio, direction (**improved** or **worsened**) plus a reason. Usually 1 mark for the pair "ratio + improved/worsened" and 1 for each valid reason.
- **"Suggest"**: short, specific, different actions, each tied to the ratio named. "Reduce expenses" and "cut costs" count as one point.
- **"Explain"**: a chain of cause and effect: "customers pay more slowly → more debts become irrecoverable → a larger expense → a lower profit margin".
- **"Advise ... justify"**: plan first. Points for, points against, then a clear recommendation that follows from them. Use the business's name and figures.
- **"State"**: one precise fact; no explanation needed.
- **Use the figures**: "expenses rose from 22% to 26% of revenue" is stronger than "expenses rose".
- **Multiple choice**: write the ratio as a fraction, decide which figure each option moves, and remember that expenses never change the gross margin and inventory never changes the liquid ratio.

Quick check

1. A trader's gross margin fell from 32% to 28%, although his selling prices did not change. Suggest two possible reasons.
2. A business has current assets of \$30 000 (including inventory \$12 000) and current liabilities of \$15 000. It buys inventory of \$3 000 on credit. Calculate the current ratio and liquid ratio before and after, and say whether each has improved.
3. A trader's closing inventory was valued at \$1 500 more than it should have been. State the effect on this year's gross profit, profit for the year and closing capital, and on next year's profit.
4. Business A has a gross margin of 45% and a profit margin of 10%. Business B has a gross margin of 35% and a profit margin of 14%. Which business controls its expenses better? Explain.
5. A trader's profit for the year is \$24 000 and her capital is \$150 000; she has no loans. She takes a five-year loan of \$50 000 at 6% a year, which earns no extra profit in the first year. Calculate her ROCE before and after, and state whether it has improved.

Answers

1. Any two: the goods cost more to buy; he received less trade discount from suppliers; he sold more of the goods that earn a lower margin.
2. Before: current ratio $30\,000 : 15\,000 = \mathbf{2.00 : 1}$; liquid ratio $18\,000 : 15\,000 = \mathbf{1.20 : 1}$. After: $33\,000 : 18\,000 = \mathbf{1.83 : 1}$; $18\,000 : 18\,000 = \mathbf{1.00 : 1}$. Both have **worsened** (the liquid ratio because liabilities rose while liquid assets didn't).
3. Gross profit, profit for the year and closing capital are all **\$1 500 too high**. Next year's opening inventory is \$1 500 too high, so next year's cost of sales is too high and **next year's profit is \$1 500 too low**.
4. **Business B**. Its expenses are $35 - 14 = 21\%$ of revenue, against $45 - 10 = 35\%$ for A. A buys and sells more profitably, but its expenses use up much more of its revenue.
5. Before: $24\,000 \div 150\,000 \times 100 = \mathbf{16.00\%}$. Interest is $6\% \times \$50\,000 = \$3\,000$, so profit for the year becomes \$21 000, but ROCE uses profit before interest: $(21\,000 + 3\,000) \div (150\,000 + 50\,000) \times 100 = \mathbf{12.00\%}$. It has **worsened**, because capital employed grew with no extra profit.

Past questions to try

- 0452/21/M/J/21 Q5: why a new trader's receivables and payables days differ from an established rival's, then advice on hiring a marketing manager.
- 0452/22/F/M/23 Q4: commenting on changes in the gross margin and liquid ratio against last year.
- 0452/11/M/J/23 Q32: which business controls its overheads best, from two margins.
- 0452/12/F/M/25 Q34: which actions improve working capital.