IGCSE Accounting Ratios

1 Joda Limited provided the following information at 31 January 2015.

	$
Inventory	18 150
Bank overdraft	7 150
Trade receivables	15 300
Trade payables	10 960
Petty cash	120

REQUIRED

(a) Calculate the current ratio. The calculation should be correct to two decimal places.

....

....

....

Answer: *(18 150 + 15 300 + 120) : (10 960 + 7 150)*
= 33 570 : 18 110 (whole formula)
= 1.85 : 1

(b) Comment on your answer to (d).

....

....

Answer: *Current assets almost twice the current liabilities*
Can meet the current liabilities from the current assets
Slightly lower than the "benchmark" of 2:1
Appears to be adequate
Comments to be based on answer to (a)

(c) Calculate the quick ratio. The calculation should be correct to two decimal places.

....

....

....

Answer: *(15 300 + 120) : (10 960 + 7 150)*
= 15 420 : 18 110 (whole formula)
= 0.85: 1

(d) Suggest one reason why the quick ratio is lower than it was in the previous financial years.

....

....

Answer: *Increase in bank overdraft/change from debit to credit bank balance Purchase of non-current assets*
Repayment of long-term loan
Increase in inventory
Increase in dividends paid

2 Kelbrook Limited provided the following information at 30 September 2015.

	$
Non-current assets at book value	102 200
Bank overdraft	6 100
Inventory	5 100
Trade receivables	8 500
Trade payables	4 300
Other payables	1 400

REQUIRED

(a) Complete the following table.

Current ratio	
Workings	Answer to two decimal places

Quick ratio	
Workings	Answer to two decimal places

Return on capital employed (ROCE)	
Workings	Answer to two decimal places

Answer:

Current ratio	
Workings *(5100 + 8500) : (6100 + 4300 + 1400)* *13 600 : 11 800*	Answer to two decimal places *1.15 : 1*

Quick ratio	
Workings *8500 : (6100 + 4300 + 1400)* *8500 : 11 800*	Answer to two decimal places *0.72 : 1*

Return on capital employed (ROCE)	
Workings $\dfrac{9000}{90\,000 + 6000 + 8000} \times \dfrac{100}{1}$ *OR* $\dfrac{9000}{102\,200 + 13\,600 - 11\,800} \times \dfrac{100}{1}$	Answer to two decimal places *8.65%*

The ratios calculated at 30 September 2014 were:

Current ratio	2.51 : 1
Quick ratio	1.57 : 1
Return on capital employed (ROCE)	12.55%

REQUIRED

(c) Comment on the change in the current ratio.

....

....

....

Answer: *Ratio has fallen*
Current assets only just cover the current liabilities
May have problems in meeting debts when they fall due Is below the generally-accepted "benchmark"
Or other suitable comments based on answer to (b)

(d) Suggest one reason for the change in the quick ratio.

....
....

Answer: *Change from positive bank balance to overdraft/increase in overdraft/reduction in bank balance*
Increased expenditure on inventory/increase in inventory
Purchase of non-current assets
Repayment of long-term loan Increase in current liabilities
Decrease in trade receivables

(e) Suggest two ways to improve the return on capital employed (ROCE).

1 ....

2 ....

Answer: *Increase the profit*
Reduce the capital employed

3 The partners provided the following information.

	At 30 April 2016	At 30 April 2017
Current ratio	1.85 : 1	1.68 : 1
Quick (acid test) ratio	1.01 : 1	0.78 : 1
		$
Inventory		19 400
Trade receivables		16 900
Trade payables		17 450
Bank overdraft		4 100

REQUIRED

(a) Explain why the partners calculated the quick (acid test) ratio as well as the current ratio.

....
....
....

Answer: *Inventory is not included in the calculation of the quick ratio.*
Either The quick ratio shows whether the business would have any surplus liquid funds if all the current liabilities were paid immediately from the liquid assets.
OR Shows the ability of the business to pay immediate / current liabilities from immediate/ liquid assets.

(b) Suggest two reasons for the change in the current ratio.

1 ....

....

2 ....

....

Answer: *Change from positive bank balance to overdraft*
Increased level of inventory
Purchases of non-current assets
Repayment of long-term loan
Increase in current liabilities/increase in trade payables/increase in bank overdraft
Decrease in trade receivables
Increase in drawings

The partners later discovered that no entry had been made for a cheque received from a credit customer for $1800.

REQUIRED

(c) Calculate the current ratio after this transaction had been recorded in the accounting records. The calculation should be correct to two decimal places.

....

....

....

....

Answer: *(19 400 + 15 100) : (17 350 + 2300 + 100)*
34 500 : 19 750
1.75 : 1

(d) Suggest two possible problems the partners may encounter if the working capital is inadequate.

1 ....

....

2 ....

....

Answer: *Cannot meet debts when they fall due*
Cannot take advantage of cash discounts
Cannot take advantage of business opportunities as they arise
May have difficulty in obtaining further supplies on credit/cannot replace inventory
Cannot meet day-to-day expenses
May not be able to take cash drawings

(e) Suggest two ways in which the partners could increase the working capital.

1 ....

....

2 ....

....

Answer: *Introduce more cash as capital/admit another partner*
Reduce drawings
Obtain long-term loan
Sell surplus non-current assets
Increase profit

4 Shiromi's financial year ends on 30 April. She provided the following information.

	At 30 April 2016	At 30 April 2017
Current ratio	1.49 : 1	0.92 : 1

All purchases are made on credit terms and all sales are made for cash.

REQUIRED

(a) Suggest two reasons for the change in the current ratio.

1 ....

....

2 ....

....

Answer: *Decrease in inventory*
Decrease in bank/cash balance or increase in overdraft
Increase in trade payables
Increase in short term loans
Increase in other payables
Decrease in other receivables
Purchase of non-current assets
Increase in drawings
Repayment of long term liabilities

(b) Suggest two problems Shiromi may encounter because her working capital is inadequate.

1 ....

....

2 ....

....

Answer: *May not be able to pay debts when they fall due*
May not be able to take advantage of cash discounts
May not be able to take advantage of business opportunities as they arise
May have difficulty in obtaining further supplies
May not be able to take drawings
May not have sufficient funds to pay for day to day expenses

5 The accountant calculated the following ratios for Vinita's business on 31 December 2016.

Current ratio	3.62 : 1
Quick ratio	0.59 : 1

REQUIRED

(a) Comment on Vinita's current ratio.

....

....

....

Answer: *The current assets are more than three times the current liabilities/it is much higher than the "benchmark" of 2 : 1*
The current liabilities can easily be paid from the current assets
Funds are not being used very effectively

(b) Explain why the quick ratio is a better measure of liquidity than the current ratio.

....

....

....

Answer: *Inventory is excluded from the calculation of the quick ratio.*
Inventory is not regarded as a liquid asset.
The ratio shows whether the business would have surplus liquid funds if the current liabilities were paid immediately from the liquid assets.

(c) Suggest two actions Vinita could take to increase her quick ratio.

1 ....

....

2 ....

....

Answer: *Introduce more cash as capital*
Obtain long term loans
Sell surplus non-current assets
Reduce drawings
Reduce inventory level

6 Tyler had the following assets and liabilities on 31 July 2017.

	$
trade payables	2900
other payables	900
non-current assets	8200
inventory	3000
trade receivables	2200
other receivables	400
bank overdraft	600

Tyler was concerned about his working capital position.

REQUIRED

(a) State how working capital is calculated.

....

Answer: *Current assets minus current liabilities*

(b) Calculate (to two decimal places) the current ratio on 31 July 2017.

....

....

....

....

Answer: *5600 : 4400 = 1.27 : 1*

(c) Name one other ratio which would help Tyler to assess his liquidity position.

....

Answer: *Quick ratio/acid test/liquid ratio*
Trade receivables collection period
Trade payables payment period
(Rate of) inventory turnover

(d) Explain two reasons why Tyler is right to be concerned about his working capital position.

1 ....

....

....

2 ....

....

....

Answer: *He may not be able to meet liabilities as they fall due.*
He may not be able to pay day to day running expenses.
He may not be able to take advantage of discounts.
He has a lot of cash tied up in inventory.

Inventory makes up more than half of his current assets.
His trade payables are greater than his trade receivables.
He has a bank overdraft.

7 Hanif's financial year ends on 31 July. He provided the following information on 31 July 2017.

	$
Inventory	87 500
Trade payables	81 500
Trade receivables	56 200
Petty cash	100
Bank overdraft	17 100

REQUIRED

(a) Calculate the current ratio. The calculation should be correct to two decimal places.

....

....

....

....

Answer: *(87 500 + 56 200 + 100) : (81 500 + 17 100)*
= 143 800 : 98 600 whole formula
= 1.46 : 1

(b) Comment on your answer to (a).

....

....

....

....

Answer: *Current assets only approximately 1½ times the current liabilities*
Lower than the "benchmark" of 2:1
Can meet the current liabilities from the current assets
Do not have a lot of surplus current assets available after paying current liabilities
Seems to be a little inadequate (depending on the type of business)

(c) Calculate the quick ratio. The calculation should be correct to two decimal places.

....

....

....

....

Answer: *(56 200 + 100) : (81 500 + 17 100)*
= 56 300 : 98 600 whole formula
= 0.57 : 1

(d) Suggest two reasons why the quick ratio is lower than it was at the end of the previous financial year.

1 ....

....

2 ....

....

Answer: *Increased expenditure on inventory*
Increase in bank overdraft/change from positive bank balance to overdraft
Purchase of non-current assets
Repayment of long-term loan
Increase in current liabilities/increase in trade payables
Decrease in trade receivables
Decrease in cash
Increase in drawings

(e) Suggest **two** problems Hanif may encounter if his working capital is inadequate.

1 ....

....

2 ....

....

Answer: *Unable to pay debts when they fall due*
Unable to take advantage of cash discounts
Unable to take advantage of business opportunities when they arise
May have difficulty in obtaining further supplies
May not be able to take drawings

(f) Complete the table by placing a tick (□) in the correct column to show how **each** of the following transactions would affect the current ratio and the quick ratio.

The first one has been completed as an example.

	current ratio			quick ratio		
	increase	decrease	no effect	increase	decrease	no effect
introduce $20 000 additional capital	✓			✓		
obtain short-term bank loan $10 000						
sell half the inventory at cost price						

Answer:

	current ratio			quick ratio		
	increase	decrease	no effect	increase	decrease	no effect
introduce $20 000 additional capital	✓			✓		
obtain short-term bank loan of $10 000			✓			✓
sell half the inventory at cost price			✓	✓		

8 Nikita's brother, Sunil, provided the following information about his business at 31 January 2018.

	$
Non-current assets	89 350
Inventory	6 800
Trade receivables	12 500
Bank	1 010 debit
Trade payables	15 200
Long-term loan	8 000

REQUIRED

(a) State what is measured by the current ratio.

....

....

Answer: *It measures the excess of current assets over current liabilities /measures liquidity.*
It measures the margin of safety between current assets and current liabilities.

(b) Calculate the current ratio for Sunil's business at 31 January 2018. The calculation should be correct to two decimal places.

....

....

....

Answer: *(6800 + 12 500 +1010) /15 200 = 1.34:1*

(c) Suggest two reasons why Nikita cannot compare her current ratio with that of Sunil.

1 ....

....

2 ....

....

Answer: *different accounting policies*
different size of business
different type of business
different locations
different capital structures
different type of goods sold
non-monetary items
other reasonable answer

(d) Suggest two ways in which Nikita might improve her working capital position.

1 ....

....

2 ....

....

Answer: *Introduce additional capital*
Sell surplus non-current assets
Reduce cash drawings
Obtain long-term loan

9 The financial year of CD Limited ends on 30 April. The following information was provided on 30 April 2018.

	$		$
Non-current assets (book value)	227 000	Ordinary share capital	
Inventory	29 000	(300 000 shares of $0.50)	150 000
Trade receivables	22 000	General reserve 1 May 2017	30 000
Bank	11 000	Retained earnings 1 May 2017	6 000
		Profit for the year ended	
		30 April 2018	13 000
		5% Debentures (repayable 2025)	50 000
		Trade and other payables	40 000

The current ratio of CD Limited on 30 April 2018 was 1.55 : 1.

The company is anxious to increase this ratio and several proposals are being considered.

REQUIRED

(a) State the formula for the calculation of the current ratio.

....

Answer: *Current assets : current liabilities*

(b) Complete the table by placing a tick (□) in the correct column to indicate the effect on the current ratio of each proposal.

The first one has been completed as an example. See next page.

	Increase	Decrease	No effect
Sell surplus non-current assets for cash	✓		
Sell goods on cash terms only			
Obtain a further long-term loan			
Buy additional non-current assets on credit rather than paying immediately			
Persuade trade receivables to pay half of their debts immediately in return for 3% cash discount			
Pay trade payables after 2 months instead of after 1 month			

Answer:

	Increase	Decrease	No effect
Sell surplus non-current assets for cash	✓		
Sell goods on cash terms only			✓
Obtain a further long-term loan	✓		
Buy additional non-current assets on credit rather than paying immediately		✓	
Persuade trade receivables to pay half of their debts immediately in return for 3% cash discount		✓	
Pay trade payables after 2 months instead of after 1 month			✓

10 Aretta opened a clothes store on 1 April 2018.

She invested $12 800 as capital. Her father gave her a loan of $7200, repayable on 1 October 2018. Interest of 5% per annum was to be paid on the loan at the end of each month.

The credit side of Aretta's cash book for April 2018 was as follows.

		$
April 1	Shop fixtures and fittings	9 500
	Credit suppliers	15 000
	Rent of premises for 6 months	2 400
	Insurance for 12 months	3 600
April 30	Operating expenses	980

Wages	1 900
Drawings	1 500

Additional information

1 All purchases were made on credit terms and all sales were made for cash.

2 Aretta's gross profit margin was 25%.

3 No record was made of cash sales.

4 Aretta decided to depreciate the shop fixtures and fittings at 12% per annum using the straight line (equal instalment) method.

5 On 30 April 2018 inventory was valued at $4080 and $810 was owed to credit suppliers.

On 30 April 2018 Aretta was concerned that her quick (acid test) ratio was very low. She considered six proposals to improve the ratio.

REQUIRED

(a) State the formula for the calculation of the quick (acid test) ratio.

....

....

Answer: *Current assets – inventory : current liabilities*

(b) Complete the following table by placing a tick (3) in the correct column to indicate the effect of each proposal on Aretta's quick (acid test) ratio.

The first one has been completed as an example. See next page.

proposal		effect on quick ratio		
		increase	decrease	no effect
1	purchase a motor vehicle on credit		3	
2	pay credit suppliers early to receive cash discount			
3	obtain a bank overdraft and repay the loan immediately			
4	arrange for the loan to be extended to 2 years			
5	sell on credit terms rather than on cash terms			
6	reduce inventory by selling half at cost price			

Answer:

proposal		effect on quick ratio		
		increase	decrease	no effect
1	purchase a motor vehicle on credit		✓	
2	pay credit suppliers early to receive cash discount	✓		
3	obtain a bank overdraft and repay the loan immediately			✓
4	arrange for the loan to be extended to 2 years	✓		
5	sell on credit terms rather than on cash terms			✓
6	reduce inventory by selling half at cost price	✓		

(c) State which proposal would affect the quick (acid test) ratio but not affect the current ratio. Explain the reason for your answer.

Proposal number ....

Reason ....

....

....

....

Answer: *Proposal number 6*
Current Ratio
Total of current assets remains unchanged
OR inventory decreases and cash/bank increases by same amount

Quick (acid test) Ratio
Total of current assets excluding inventory increases
OR Inventory is excluded from the calculation but cash/bank increases

11 Annie is a wholesaler of ladies' clothing, selling to retail stores on credit terms. She provided the following information at the end of her second year of trading on 31 December 2015.

	$
Revenue	40 000
Cost of sales	30 500
Profit for the year	3 800
Inventory 1 January 2015	3 600
Inventory 31 December 2015	4 800
Capital employed 1 January 2015	92 000
Trade receivables at 31 December 2015	4 350

Annie decided to compare her results with those of her two brothers, Mark and Tony, who formed a partnership six years ago to operate a wholesale food business.

REQUIRED

(a) Complete the table on the opposite page to show the ratios for Annie's business for the year ended 31 December 2015.

You may use the space below for your workings. See next page.

Workings

Ratio	Annie	Mark and Tony
Percentage of gross profit to revenue	23.75%	16.50%
Percentage of profit for the year to revenue	9.50%	11.35%
Rate of inventory turnover (to **two** decimal places)	.... times	20.15 times
Percentage of profit for the year to opening capital employed (ROCE) (to **two** decimal places)	.... %	10.35%
Trade receivables collection period (rounded up to the next whole day)	.... days	34 days

Answer:

Ratio	Annie	
Rate of inventory turnover to two decimal places	*7.26 times*	
Percentage of profit for the year to capital employed (ROCE) (to two decimal places)	*4.13%*	
Trade receivables collection period (rounded up to the next whole day)	*40 days*	

Calculations to show the breakdown of marks:

<u>Rate of inventory turnover</u>

$$\frac{30\ 500}{(3\ 600 + 4\ 800) \div 2} \qquad \textit{whole formula} = 7.26 \textit{ times}$$

<u>Percentage of profit for the year to capital employed</u>

$$\frac{3\ 800}{92\ 000} \times \frac{100}{1} = 4.13\%$$

<u>Trade receivables collection period</u>

$$\frac{4\ 350}{40\ 000} \times \frac{365}{1} \qquad \textit{whole formula} = 39.69 = 40 \textit{ days}$$

(b) Explain one reason for the difference between the percentages of gross profit to revenue of Annie and her brothers.

....

....

....

Answer: *Different type of goods*
EITHER
Food has a lower gross profit margin than clothing
OR The food store is cutting prices to sell more goods

(c) Comment on the possible effects of Annie increasing the selling price of her goods.

....

....

....

Answer: *Total revenue from sales may increase so profit may increase*
Customers may look for cheaper suppliers, so profits may actually fall

(d) State whose business had better control over its expenses. Give a reason for your answer.

Business ....

Reason ....

....

Answer: *Mark and Tony*
Annie's expenses/revenue is 14.25%: Mark and Tony's ratio is 5.15%

(e) Explain one reason for the difference in the rate of inventory turnover.

....

....

....

Answer: *Different type of goods*
EITHER Food sells more quickly than clothing
OR Food is in greater demand than clothing
OR Food store will probably have a lower value of inventory
OR Food is cheaper than clothing

Annie has a bank overdraft but believes that her current ratio could be improved. She is considering four courses of action.

REQUIRED

(f) Complete the following table by placing a tick (✓) in the correct column to show how each of the courses of action would affect Annie's current ratio.

	Increase	Decrease	No effect
Create a provision for doubtful debts			
Delay payments to credit suppliers			
Obtain a long-term loan			
Obtain permission from the bank to increase the overdraft			

Answer:

	Increase	Decrease	No effect
Create a provision for doubtful debts		✓	
Delay payments to credit suppliers			✓
Obtain a long term loan	✓		
Obtain permission from the bank to increase the overdraft			✓

12 Which statements are true about the current ratio?

1 It can be higher than the quick ratio.
2 It can be lower than the quick ratio.
3 It differs from the quick ratio because of bank overdraft.
4 It differs from the quick ratio because of inventories of goods.

A 1 and 3

B 1 and 4

C 2 and 3

D 2 and 4

Answer: *B. 1 and 4*

13 Malorie provided the following information.

	30 June 2015 $		30 June 2016 $	
Bank	400	debit	1300	credit
Trade receivables	850		1400	
Trade payables	750		700	
Inventory	550		?	
Current ratio	?		1.2 : 1	

REQUIRED

Calculate:

(i) Malorie's current ratio at 30 June 2015 (to one decimal place)

....

....

....

Answer: $\frac{135\,480}{14250}$ *9.51times*

(ii) Malorie's inventory at 30 June 2016

....

....

....

Answer: *[(1300 + 700) × 1.2] – 1400 = 1000*

14 Joey is a trader. His financial year ends on 30 September. He provided the following information for the year ended 30 September 2016.

	$
Revenue	290 000
Cost of sales	224 025
Expenses	38 860

Joey obtained the trading results of DT Traders, another business in the same town, and decided to compare the profitability of the two businesses.

REQUIRED

(a) Complete the following table to show the ratios for Joey's business. The calculations should be to **two** decimal places.

Ratio	Joey	DT Traders
Percentage of gross profit to revenue (gross profit margin)	.... %	18.50%
Percentage of profit for the year to revenue (net profit margin)	.... %	10.25%

You may use the space below for your workings.

Workings

Answer:

$$\frac{(290\ 000 - 224\ 025)}{290\ 000} \Big\} (1) \times \frac{100}{1} = 22.75\%$$

$$\frac{(65\ 975\mathrm{OF} - 38\ 860)}{290\ 000} \Big\} (1) \times \frac{100}{1} = 9.35\%$$