South Tuen Mun Government Secondary School

Basic Ratio Analysis Quiz

A. Multiple-Choice Questions

Choose the best answer for each question. (2 marks each)

1. Which of the following situation is correct if both of current ratio and acid test ratio are 1:1?
   A. The company suffers liquidity difficulty.
   B. The company suffers business loss during the accounting year.
   C. The company holds excess inventory as at year accounting end.
   D. The company does not hold any inventory as at accounting year end.

2. A company calculates the profitability ratios because they concern with the ability of company
   A. to generate returns to owners.
   B. to repay debts at their due dates.
   C. to generate returns from investing non-current assets.
   D. to generate profits during an accounting period.

3. The quick ratio may also be known as the
   (1) acid test ratio
   (2) working capital ratio
   (3) current ratio
   A. (1) only
   B. (3) only
   C. (1) and (2) only
   D. (2) and (3) only

4. ____________ was involved in the calculation of both current ratio and net profit ratio.
   A. Closing capital
   B. Opening inventory
   C. Closing inventory
   D. Cost of goods sold

5. The following figures are related to Times Company:

Sales	$800,000
Opening inventory	$30,000
Purchases	$500,000
Carriage inwards	$20,000
Carriage outwards	$50,000

The company does not have any inventory in the warehouse at the accounting year end.
What is the gross profit ratio of the company?
A. 31.25%
B. 32.00%
C. 33.33%
D. 45.45%

6. The following figures are related to Mrs Chiu's Company:

Turnover	$1,200,000
Cost of sales	$750,000
Other revenues	$120,000
Expenses	$240,000

What is the net profit ratio of the company?
A. 25.00%
B. 27.50%
C. 34.09%
D. 37.50%

7. On 1 January 20X5, Flying Company was started with $20,000 cash and $40,000 bank deposits. During the first year of operations, goods amounted to $83,000 were purchased and operating expenses of $16,000 were incurred. The owner settled the accounts payable of $8,000 and received a cash discount of 5%.
The accountant had counted the closing inventories which were valued at $15,000 and the gross profit ratio was 32%. What was the return on capital employed for the year 20X5?
A. 22.78%
B. 38.41%
C. 41.18%
D. 41.41%

8. The following information is extracted from the books of Kelvin Company:

	20X5	20X6
Gross profit ratio	26%	31%
Net profit ratio	22%	18%
Cost of goods sold	$399,600	$303,600

Assume there is no other revenue, which of the following can be concluded from the above information?

A. Kelvin Company has higher working capital in 20X6.
B. Kelvin Company has higher gross profit in 20X6.
C. Kelvin Company has higher net sales in 20X6.
D. Kelvin Company has higher operating expenses in 20X6.

9. The following were the account balance of Cloud Company as at 31 December 20X7 and 31 December 20X8:

	20X7	20X8
	$	$
Current assets	150,300	170,200
Current liabilities	120,400	100,500
Non-current assets	70,000	80,000
Non-current liabilities	90,000	65,000

Suppose there was no drawings and capital introduced in 20X7 and 20X8,
The return on capital employed in 20X8 is

A. 11.93%
B. 12.69%
C. 69.35%
D. 86.69%

10. The following were some of the account balance of Thomas Company as at 31 December 20X8:

	$
Sales	145,600
Purchases	87,500
Returns outwards	5,100
Other expenses	32,100
Other revenues	4,000
Drawings	4,500
Opening inventory	24,000

Suppose the closing inventory as at 31 December 20X8 was $21,000. What is the net profit ratio for the year ended 31 December 20X8?

A. 18.97%
B. 19.64%
C. 22.05%
D. 22.85%

B. Short Questions

1. The following financial statements relate to Connie Chiu:

Connie Chiu

Income statements for the years ended 31 October

		20X4	20X3
		$	$
Sales		1,900,000	1,600,000
Less:	Cost of goods sold	990,000	800,000
Gross profit		910,000	800,000
Add:	Other revenues	120,000	150,000
		1,030,000	950,000
Less:	Expenses	410,000	200,000
Net profit		620,000	750,000

Connie Chiu

Statement of financial position as at 31 October

	20X4		20X3	
Non-current assets	$	$	$	$
Motor vehicles		780,000		570,000
Current assets				
Inventory	180,000		120,000	
Accounts receivable	380,000		370,000	
Bank	120,000		170,000	
	680,000		660,000	
Less: Current liabilities				
Accounts payable	160,000		150,000	
Net current assets		520,000		510,000
		1,300,000		1,080,000
Less: Non-current liabilities				
Bank loan (repayable in 20X6)		350,000		350,000
		950,000		730,000
Financed by:				
Capital				
Balance as at 1 November		730,000		300,000
Add: Net profit		620,000		750,000
		1,350,000		1,050,000
Less: Drawings		400,000		320,000
		950,000		730,000

Calculate (to two decimal places) the following ratios for both 20X3 and 20X4. All workings must be shown.

(a) Gross profit ratio (2 marks)

(b) Net profit ratio (2 marks)

(c) Current ratio (2 marks)

(d) Quick ratio (2 marks)

(e) Return on capital employed. (2 marks)

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Basic Ratio Quiz II

2. The following information is extracted from the books of Sonia's Company for the years ended 30 June 20X2 and 30 June 20X3:

	20X3	20X2
	$	$
Sales	1,280,000	1,520,000
Cost of goods sold	768,000	988,000
Expenses	340,000	400,000
Total current assets	840,000	680,000
Total current liabilities	420,000	240,000
Opening inventory	87,000	66,000
Closing inventory	98,000	87,000

(a) For each of the two years, calculate the:

(1) Gross profit ratio (2 marks)

(2) Net profit ratio (2 marks)

(3) Current ratio (2 marks)

(4) Quick ratio (2 marks)

(b) Sales in 20X3 fell compared to 20X2. Briefly comment the profitability of the company. (2 marks)

3. Honey Company and Sweetheart Company are companies engaging in the trading of kitchen utensils. The following information is provided in respect of the year ended 31 December 20X9:

Income statements for the years ended 31 December 20X9

	Honey Company	**Sweetheart Company**
	$	**$**
Sales	1,800,000	1,600,000
Less: Cost of goods sold	780,000	800,000
Gross profit	1,020,000	800,000
Add: Other revenues	150,000	120,000
	1,170,000	920,000
Less: Expenses	100,000	300,000
Net profit	1,070,000	620,000

Statement of financial position as at 31 December 20X9

	Honey Company		**Sweetheart Company**	
Non-current assets	**$**	**$**	**$**	**$**
Property		1,000,000		1,250,000
Machinery		400,000		250,000
Office equipment		300,000		50,000
		1,700,000		1,550,000
Current assets				
Inventory	310,000		140,000	
Accounts receivable	370,000		160,000	
Bank	-		80,000	
	680,000		380,000	
Less: Current liabilities				
Accounts payable	240,000		230,000	
Bank overdraft	210,000		-	
Net current assets		230,000		150,000
		1,930,000		1,700,000
Financed by:				
Capital				
Balance as at 1 January 20X8		1,260,000		1,280,000
Add: Net profit		1,070,000		620,000
		2,330,000		1,900,000
Less: Drawings		400,000		200,000
		1,930,000		1,700,000

(a) Calculate (to two decimal places) the following ratios for the two companies for the year ended 31 December 20X9:

(1) Gross profit ratio (2 marks)

(2) Net profit ratio (2 marks)

(3) Current ratio (2 marks)

(4) Quick ratio (2 marks)

(5) Return on capital employed (2 marks)

(b) Compare and comment on the performance of the two companies using the ratios calculated in (a) above in terms of their profitability. (4 marks)

4. The following is the statement of financial position of Number One Company:

Number One Company
Statement of Financial Position as at 31 December 20X2

	$	$
Non-current assets		
Premises		200,000
Office equipment		80,000
		280,000
Current assets		
Inventory	28,000	
Accounts receivable	44,000	
Cash at bank	56,000	
	128,000	
Less: Current liabilities		
Accounts payable	70,000	
Net current assets		58,000
		338,000
Financed by:		
Capital		
Balance as at 1 January 20X2		253,000
Add: Net profit		85,000
		338,000

Calculate (to two decimal places) the following ratios for the year 20X2:

(a) Working capital ratio (2 marks)

(b) Quick ratio (2 marks)

(c) Return on capital employed (2 marks)

5. The following is the trial balance of Big World Company as at 31 December 20X4:

Big World Company

Trial Balance as at 31 December 20X4

	Dr.	Cr.
	$	$
Fixtures and fittings	150,000	
Motor van	80,000	
Purchases	75,000	
Sales		183,000
Accounts receivable	65,000	
Accounts payable		72,000
Inventory	47,000	
Cash	38,000	
Returns inwards and returns outwards	8,500	6,800
Wages and salaries	18,000	
Drawings	9,000	
Other expenses	35,000	
Capital		263,700
	525,500	525,500

Suppose the inventory as at 31 December 20X4 amounted to $26,000, calculate (to two decimal places) the following ratios for the year 20X4:

(a) Working capital ratio (2 marks)

(b) Quick ratio (2 marks)

(c) Gross profit ratio (2 marks)

(d) Net profit ratio (2 marks)

(e) Return on capital employed (2 marks)

6. The following is the statement of financial position of Prestige Company:

Prestige Company
Statement of Financial Position as at 31 December 20X4

	$	$	$
Non-current assets			
Premises			250,000
Fixtures and fittings			130,000
Motor vehicles			140,000
			520,000
Current assets			
Inventory		75,000	
Accounts receivable		80,000	
Cash		40,000	
		195,000	
Less: Current liabilities			
Accounts payable	68,000		
Bank overdraft	35,000	103,000	
Net current assets			92,000
			612,000
Less: Non-current liabilities			
Long-term bank loan			200,000
			412,000
Financed by:			
Capital			
Balance as at 1 January 20X4			360,000
Add: Net profit			52,000
			412,000

The industry averages for the year ended 31 December 20X4 are listed below:

Current ratio	1.6:1
Quick ratio	0.86:1
Gross profit ratio	26%
Net profit ratio	15%
Return on capital employed	20%

Based on the above information, comment on the liquidity and profitability of Prestige Company for the year 20X4. (6 marks)

Suggested Answers

Chapter 7

A. Multiple-Choice Questions

1.	D	2.	D	3.	A	4.	C	5.	A
6.	B	7.	A	8.	D	9.	B	10.	C

B. Short Questions

1. **20X3:**

(a) Gross profit ratio

$= \dfrac{\$800{,}000}{\$1{,}600{,}000} \times 100\%$

$= 50\%$ (1)

(b) Net profit ratio

$= \dfrac{\$750{,}000}{\$1{,}600{,}000} \times 100\%$

$= 46.88\%$ (1)

(c) Current ratio

$= \dfrac{\$660{,}000}{\$150{,}000} : 1$

$= 4.4 : 1$ (1)

(d) Quick ratio

$= \dfrac{\$660{,}000 - \$120{,}000}{\$150{,}000} : 1$

$= 3.6 : 1$ (1)

(e) Return on capital employed

$= \dfrac{\$750{,}000}{(\$300{,}000 + \$730{,}000) \div 2} \times 100\%$

$= 145.63\%\%$ (1)

20X4:

(a) Gross profit ratio

$$= \frac{\$910,000}{\$1,900,000} \times 100\%$$

$= 47.89\%$ (1)

(b) Net profit ratio

$$= \frac{\$620,000}{\$1,900,000} \times 100\%$$

$= 32.63\%$ (1)

(c) Current ratio

$$= \frac{\$680,000}{\$160,000} : 1$$

$= 4.25 : 1$ (1)

(d) Quick ratio

$$= \frac{\$680,000 - \$180,000}{\$160,000} : 1$$

$= 3.13 : 1$ (1)

(e) Return on capital employed

$$= \frac{\$620,000}{(\$730,000 + \$950,000) \div 2} \times 100\%$$

$= 77.14\%$ (1)

2. (a) **20X3:**

(1) Gross profit ratio

$$= \frac{\$1,280,000 - \$768,000}{\$1,280,000} \times 100\%$$

$= 40\%$ (1)

(2) Net profit ratio

$$= \frac{\$1,280,000 - \$768,000 - \$340,000}{\$1,280,000} \times 100\%$$

$= 13.44\%$ (1)

(3) Current ratio

$$= \frac{\$840,000}{\$420,000} : 1$$

$= 2 : 1$ (1)

(4) Quick ratio

$$= \frac{\$840,000 - \$98,000}{\$420,000} : 1$$

$= 1.77 : 1$ (1)

20X2:

(1) Gross profit ratio

$$= \frac{\$1,520,000 - \$988,000}{\$1,520,000} \times 100\%$$

$= 35\%$ (1)

(2) Net profit ratio

$$= \frac{\$1,520,000 - \$988,000 - \$400,000}{\$1,520,000} \times 100\%$$

$= 8.68\%$ (1)

(3) Current ratio

$$= \frac{\$680,000}{\$240,000} : 1$$

$= 2.83 : 1$ (1)

(4) Quick ratio

$$= \frac{\$680,000 - \$87,000}{\$240,000} : 1$$

$= 2.47 : 1$ (1)

(b)
- The profitability of the business improved in 20X3. (1)
- This is because the gross profit ratio has increased from 35% in 20X2 to 40% in 20X3 and the net profit ratio has increased from 8.68% in 20X2 to 13.44% in 20X3. (1)

3. (a) **Honey Company:**

(1) Gross profit ratio

$$= \frac{\$1,020,000}{\$1,800,000} \times 100\%$$

= 56.67% (1)

(2) Net profit ratio

$$= \frac{\$1,070,000}{\$1,800,000} \times 100\%$$

= 59.44% (1)

(3) Current ratio

$$= \frac{\$680,000}{\$240,000 + \$210,000} : 1$$

= 1.51 : 1 (1)

(4) Quick ratio

$$= \frac{\$680000 - \$310,000}{\$240,000 + \$210,000} : 1$$

= 0.82 : 1 (1)

(5) Return on capital employed

$$= \frac{\$1,070,000}{(\$1,260,000 + \$1,930,000) \div 2} \times 100\%$$

= 67.08% (1)

Sweetheart Company:

(1) Gross profit ratio

$$= \frac{\$800,000}{\$1,600,000} \times 100\%$$

= 50% (1)

(2) Net profit ratio

$$= \frac{\$620,000}{\$1,600,000} \times 100\%$$

= 38.75% (1)

(3) Current ratio

$$= \frac{\$380,000}{\$230,000} : 1$$

$= 1.65 : 1$ (1)

(4) Quick ratio

$$= \frac{\$380,000 - \$140,000}{\$230,000} : 1$$

$= 1.04 : 1$ (1)

(5) Return on capital employed

$$= \frac{\$620,000}{(\$1,280,000 + \$1,700,000) \div 2} \times 100\%$$

$= 41.61\%$ (1)

(b)
- Honey Company has a higher gross profit ratio of 56.67% as compared with the 50% achieved by Sweetheart Company.
- Due to the lower operating expenses of Honey Company, it generated a net profit ratio of 59.44%, as compared with 38.75% that Sweetheart Company achieved.
- Honey Company also achieved a much higher return on capital employed of 67.08%, which was more than that of Sweetheart Company of 41.61%. Honey Company seems to have the ability to generate a better return for its shareholders.
- The profitability of Honey Company is better than Sweetheart Company.

(4)

4. (a) Working capital ratio

$$= \frac{\$128,000}{\$70,000}:1$$

$= 1.83 : 1$ (2)

(b) Quick ratio

$$= \frac{\$128,000 - \$28,000}{\$70,000}:1$$

$= 1.43 : 1$ (2)

(c) Return on capital employed

$$= \frac{\$85,000}{(\$253,000 + \$338,000) \div 2} \times 100\%$$

$= 28.76\%$ (2)

5. (a) Working capital ratio

$$= \frac{\$65,000 + \$26,000 + \$38,000}{\$72,000}:1$$

$= 1.79 : 1$ (2)

(b) Quick ratio

$$= \frac{\$129,000 - \$26,000}{\$72,000}:1$$

$= 1.43 : 1$ (2)

(c) Gross profit ratio

$$= \frac{\$85,300}{\$183,000 - \$8,500} \times 100\%$$

$= 48.88\%$ (2)

(d) Net profit ratio

$$= \frac{\$32,300}{\$183,000 - \$8,500} \times 100\%$$

$= 18.51\%$ (2)

(e) Return on capital employed

$$= \frac{\$32,300}{(\$263,700 + \$287,000) \div 2} \times 100\%$$

$= 11.73\%$ (2)

6. Working capital ratio

$$= \frac{\$195,000}{\$103,000} : 1$$

$= 1.89 : 1$

Quick ratio

$$= \frac{\$195,000 - \$75,000}{\$103,000} : 1$$

$= 1.17 : 1$

Return on capital employed

$$= \frac{\$52,000}{(\$360,000 + \$412,000) \div 2} \times 100\%$$

$= 13.47\%$

Liquidity:

- Prestige Company had a higher current ratio and quick ratio than the industry averages which indicates its liquidity is acceptable in the industry. (2)
- Compared with the industry averages, the difference between the current ratio and quick ratio of Prestige Company is roughly the same which may imply the inventory level is not excessive. (2)

Profitability:

- Prestige Company had a smaller return on capital employed than the industry average which indicates the profitability of the funds invested is fall behind. (2)

END