Practice problems for Chapter 7

1) Prepare a simple income statement using the accounts below

	Accounts ($000)
Depreciation	25
General and administrative expenses	22
Sales	345
Sales expenses	18
Cost of goods sold	255
Lease expense	4
Interest expense	3

   a) Arrange the accounts into a well-labelled income statement. Make sure you label and solve for gross profit, operating profits and net profits before taxes.
   b) Using a 35% tax rate, calculate taxes paid and net profit after taxes.
   c) Assuming a dividend of $1.10 per share with 4.25 thousand shares issued and calculate EPS.

2) Philagem Limited ended 2007 with net profits before taxes of $218,000. The company is subject to a 40% tax rate and must pay $32,000 in preference dividends prior to distributing any earnings on the 85000 shares of ordinary shares currently issued.
   a) Calculate Philagem's 2007 earnings per share (EPS)
   b) If the firm paid ordinary share dividends of $0.80 per share, how many dollars would go to retained earnings?

3) Use the appropriate items from those listed below to prepare in good form Owen Davis Company's balance sheet at 31 Dec, 2007.

Item	**Value ($000) at 31st, Dec, 2007**
Account payable	$220
Account receivable	450
Accruals	55
Accumulated depreciation	265
Buildings	225
Cash	215
Cost of goods sold	2500
Depreciation expense	45
Equipment	140
Furniture and fixtures	170
General expense	320
Inventories	375
Land	100
Non-current debts	420

Machinery	420
Marketable securities	75
Notes payable	475
Ordinary shares	450
Preference shares	100
Retained earnings	210
Sales revenue	3600
Vehicles	25

4) Complete the 2007 balance sheet for O'Keefe Industries using the information that follows it.

Cash	$30000	Account payable	$120000
Marketable securities	25000	Notes payable	160,000
Account receivable	200000	Accruals	20000
Inventories	225000	Total current liabilities	300,000
Total current assets	480000	Non-current debt	600,000
Net noncurrent assets	1,020,000	Shareholders' equity	600000
Total assets	1,500,000	Total liabilities and shareholders' equity	1,500,000

The following financial data for 2006 are also available:

1 Sales totalled $ 1.8 million
2 The gross profit margin was 25%
3 Inventory turnover was 6.0
4 There are 360 days in the year
5 The average collection period was 40 days
6 The current ratio was 1.6
7 The total asset turnover ratio was 1.2
8 The debt ratio was 60%

5) Choose the one alternative that best completes the statements or answers the question. Use the information below to answer the four questions

Income statement Dana Dairy Products For the year ended 31 Dec 2007	
Sales revenue	$100,000
Less cost of goods sold	87,000
Gross profits	13,000
Less operating expenses	11,000
Operating profit	2,000
Less interest expense	500
Net profit before taxes	1,500
Less taxes @ 40%	600
Net profit after taxes	900

Balance sheet Dana Dairy Products 31 Dec 2007		
Assets		
Cash		$1000
Account receivables		8900
Inventories		4350
Total current assets		14250
Gross non-current assets	35000	
Less accumulated depreciation	13250	
Net non-current assets		21750
Total assets		**36000**
Liabilities and shareholders' equity		
Accounts payable	9000	
Accruals	6675	
Total current liabilities		15675
Long-term debt		4125
Total liabilities		19800
Ordinary shares		1000
Retained earnings		15200
Total shareholders' equity		16200
Total liabilities and shareholders' equity		**36000**

1 The average collection period (assume 360 days) for Dana Dairy Products in 2007 is:

a. 32 days
b. 25 days
c. 11 days
d. 35 days

2 The debt ratio for Dana Dairy Products in 2007 is:
a. 50%
b. 55%
c. 44%
d. 11%

3 The gross profit margin and net profit margin for Dana Dairy Products in 2007 are:
a. 13% and 1.5% respectively
b. 13% and 0.9% respectively
c. 2% and 1.5% respectively
d. 2% and 0.9% respectively

4 The return on total assets for Dana Dairy Products for 2007 is:
a. 0.9%
b. 2.5%
c. 25%
d. 5.5%

6) Robert Arias recently inherited a share portfolio from his uncle. Wishing to learn more about the companies that he now has investments in, Robert performs a ratio analysis on each one and decices to compare them with each other. Some of his ratios are listed.

	Energy Electric	Burger Heaven	Fink Software	Roland Motors
Current ratio	1.10	1.3	6.8	4.5
Quick ratio	0.90	0.82	5.2	3.7
Debt ratio	0.68	0.46	0	0.35
Net profit margin	6.2%	14.3%	28.5%	8.4%

Assumingn that his uncle was a wise investor who assembled the portfolio with care, Robert find the wide differences in these ratios confusing. Help him out.

a. What problems might Robert encounter in comparing these companies with one another on the basis of their ratios?

b. Why might the current and quick ratios for the electricity and the fast-food shares be so much lower than the same ratios for the other companies?

c. Why might it be all right for the electricity firm to carry a large amount for debt, but the same not be true for the software company?

d. Why wouldn't investors invest all their money in software companies instead of less profitable companies? (Focus on risk and reward).

7) If we know that a firm has a net profit margin of 4.5%, total asset turnover of 0.72 and an equity multiplier of 1.43, what is its ROE? What is the advantage to using the DuPont system to calculate ROE over the direct calculation of earnings available for ordinary shareholders?
8) Pelican Paper and Timberland Forest are rivals in the manufacture of craft papers. Some financial statement values for each company are listed. Use them in a ratio analysis that compares their financial leverage and profitability.

	Pelican Paper ($000)	Timberland Forest ($000)
Total assets	$10,000	$10,000
Total equity	9,000	5,000
Total debt	1,000	5,000
Annual interest	100	500
Total sales	25,000	25,000
EBIT	6,250	6,250
Net income	3,690	3,450

a. Calculate the following debt and coverage ratios for the two companies. Discuss their financial risk and ability to cover the costs in relation to each other

i, Debt ratio

ii, Time interest earned

b. Calculate the following profitability ratios for the two companies. Discuss their profitability relative to each other

i, Operating profit margin

ii, Net profit margin

iii, Return on assets

iv, Return on equity

c. In what way has the larger debt of Timberland Forest made it more profitable than Pelican Paper? What are the risks that Timberland's investors undertake when they choose to purchase its stock instead of Pelican's?

9) Bauman Company's total current assets, net working capital and inventory for each of the past four years are given below

Item	**2004**	**2005**	**2006**	**2007**
Total current assets	16950	21900	22500	27000
Net working capital	7950	9300	9900	9600
Inventory	6000	6900	6900	7200

a. Calculate the firm's current and quick ratios for each year. Compare the resulting time series of each measure of liquidity (i.e. net working capital, the current ratio and the quick ratio)

b. Comment on the firm's liquidity over the 2004-07 period.

c. If you were told that Bauman Company's inventory turnover for each year in the 2004-07 period and the industry averages were as follows, would this support or conflict with your evaluation in b? Why?

Inventory turnover	**2004**	**2005**	**2006**	**2007**
Bauman Company	6.3	6.8	7.0	6.4
Industry average	10.6	11.2	10.8	11.0

10) MacDougal Printing had sales totalling $40 million in financial year 2007. Some ratios for the company are listed. Use this information to determine the dollar values of various income statement and balance sheet accounts as required.

MacDougal Printing Year ended 31 Dec 2007	
Sales	$40,000,000
Gross profit margin	80%
Operating profit margin	35%
Net profit margin	8%
Return on total assets	16%
Return on equity	20%
Total asset turnover	2
Average collection period	62.2 days

Calculate values for the following:

a. Gross profits.
b. Cost of goods sold.
c. Operating profits
d. Operating expenses

e. Net profits
f. Total assets
g. Total equity.
h. Account receivable.