

**Week #16 – Chapter 12 Homework Assignment****Problem 1 (Textbook Reference: P12-3) – Compute working capital, current ratio, and acid-test ratio**

The following data are for Toy Company:

	<b>December 31</b>	
	<b>2013</b>	<b>2012</b>
Allowance for uncollectible accounts	\$ 72,000	\$ 57,000
Prepaid expenses	\$ 34,500	\$ 45,000
Accrued liabilities	\$ 210,000	\$ 186,000
Cash in Bank A	\$ 1,095,000	\$ 975,000
Wages payable	\$ -	\$ 37,500
Accounts payable	\$ 714,000	\$ 585,000
Merchandise inventory	\$ 1,342,500	\$ 1,437,000
Bonds payable, due in 2015	\$ 615,000	\$ 594,000
Marketable securities	\$ 217,500	\$ 147,000
Notes payable (due in six months)	\$ 300,000	\$ 195,000
Accounts receivable	\$ 907,500	\$ 870,000
Cash flow from operating activities	\$ 192,000	\$ 180,000

**Required:**

- a. Compute the amount of working capital at both year-end dates.
  - 2013: \_\_\_\_\_
  - 2012: \_\_\_\_\_
- b. Compute the current ratio at both year-end dates. Round your answers two decimal places.
  - 2013: \_\_\_\_\_
  - 2012: \_\_\_\_\_
- c. Compute the acid-test ratio at both year-end dates. Round your answers two decimal places.
  - 2013: \_\_\_\_\_
  - 2012: \_\_\_\_\_
- d. Compute the cash flow liquidity ratio at both year-end dates. Round your answers two decimal places.
  - 2013: \_\_\_\_\_
  - 2012: \_\_\_\_\_

**Problem 2 (Textbook Reference: P12-6) – Compute EPS, rate of return on stockholders' equity, and number of times interest earned for two years**

Amazon.com, Inc. is a multinational E-commerce company that earns revenues from the sale of books, e-books, music, software, electronics, and other consumer goods. The following information is taken from the 2011 annual report from Amazon.com:

(in millions)	2011	2010
Net sales	\$48,077	\$34,204
Income before interest and taxes	\$ 1,042	\$ 1,563
Net income	\$ 631	\$ 1,152
Interest expense	\$ 108	\$ 66
Stockholders' equity (on December 31, 2009, \$5,257)	\$ 7,757	\$ 6,864
Common stock, par value \$0.01, December 31	\$ 5	\$ 5

**Required:**

Compute the following for both 2011 and 2010. Then compare and comment.

a. EPS of common stock. Round your answers two decimal places.

- 2011: \_\_\_\_\_
- 2010: \_\_\_\_\_

b. Net income to net sales. Round your answers two decimal places.

- 2011: \_\_\_\_\_
- 2010: \_\_\_\_\_

c. Net income to average common stockholders' equity. Round your answers two decimal places.

- 2011: \_\_\_\_\_
- 2010: \_\_\_\_\_

d. Times interest earned ratio. Round your answers two decimal places.

- 2011: \_\_\_\_\_
- 2010: \_\_\_\_\_

**Problem 3 (Textbook Reference: P12-7A) – Compute numerous standard ratios**

Parametric Technology Corporation is in the CAD/CAM/CAE industry and is the top supplier of software tools used to automate a manufacturing company. The following consolidated balance sheet and supplementary data are for Parametric for 2011:

**PARAMETRIC TECHNOLOGY CORPORATION**  
**Consolidated Balance Sheet**  
**September 30, 2011 (in thousands)**

**Assets**

*Current Assets*

Cash and cash equivalents	\$ 167,878
Accounts receivable, net of allowance for doubtful accounts of \$3,902	230,220
Other current assets	194,166
Total Current Assets	\$ 592,264
Property and equipment, net	62,569
Goodwill	613,394
Other assets	361,455
Total Assets	<u>\$ 1,629,682</u>

**Liabilities and Stockholders' Equity**

*Current Liabilities*

Accounts payable and accrued expenses	\$ 77,141
Accrued compensation	95,980
Deferred revenue	279,935
Income taxes	16,335
Total Current Liabilities	\$ 469,391
Long-term liabilities	337,601

*Stockholders' Equity*

Preferred stock, \$0.01 par value; 5,000 shares authorized; none issued	-
Common stock, \$0.01 par value; 500,000 shares authorized; 116,937 (2015) and 115,826 (2014) shares issued	1,169
Additional paid-in capital	1,805,021
Accumulated deficit	(918,736)
Accumulated other comprehensive loss	(64,764)
Total Liabilities and Stockholders' Equity	<u>\$ 1,629,682</u>

**Supplementary Data for 2011 (in millions)**

1. Net income, \$85,424.
2. Income before interest and taxes, \$117,114.
3. Cost of goods sold, \$356,768.
4. Net sales, \$1,166,949.
5. Total interest expense for the year, \$3,310.
6. Weighted-average number of shares outstanding, 117,579.

**Required:**

Calculate the following ratios and show your computations. For calculations normally involving averages, such as average accounts receivable or average stockholders' equity, use year-end amounts if the information is not available to use averages. Round all answers to two decimal places. ***YOU MUST SHOW YOUR WORK TO RECEIVE CREDIT. The next page has been left blank for you to show your work.***

- a. Working capital: \_\_\_\_\_
- b. Current ratio: \_\_\_\_\_
- c. Net income to average common stockholders' equity: \_\_\_\_\_
- d. Accounts receivable turnover: \_\_\_\_\_
- e. Number of days' sales in accounts receivable (assume 365 days in 2015): \_\_\_\_\_
- f. Times interest earned ratio: \_\_\_\_\_
- g. Equity ratio: \_\_\_\_\_
- h. EPS of common stock: \_\_\_\_\_
- i. Net income to net sales: \_\_\_\_\_
- j. Total asset turnover: \_\_\_\_\_
- k. Acid-test ratio: \_\_\_\_\_

**\*\*\*A formula sheet has been provided at the end of this assignment\*\*\***

**Problem 3 Worksheet**

**WORKING CAPITAL = CURRENT ASSETS - CURRENT LIABILITIES****Illustration 12.3 Summary of Ratios**

<b>Liquidity Ratios</b>	<b>Formula</b>	<b>Significance</b>
Current, or working capital, ratio	Current assets ÷ Current liabilities	Test of debt-paying ability
Acid-test (quick) ratio	Quick assets (Cash + Marketable securities + Net receivables) ÷ Current liabilities	Test of immediate debt-paying ability
Cash flow liquidity ratio	(Cash and marketable securities + Net cash provided by operating activities) ÷ Current liabilities	Test of short-term, debt-paying ability
Accounts receivable turnover	Net credit sales (or net sales) ÷ Average net accounts receivable	Test of quality of accounts receivable
Number of days' sales in accounts receivable (average collection period of accounts receivable)	Number of days in year (365) ÷ Accounts receivable turnover	Test of quality of accounts receivable
Inventory turnover	Cost of goods sold ÷ Average inventory	Test of whether or not a sufficient volume of business is being generated relative to inventory
Total assets turnover	Net sales ÷ Average total assets	Test of whether or not the volume of business generated is adequate relative to amount of capital invested in the business
<b>Equity, or Long-term Solvency, Ratios</b>		
Equity (stockholders' equity) ratio	Stockholders' equity ÷ Total assets (or total equities)	Index of long-run solvency and safety
Stockholders' equity to debt (debt to equity) ratio	Stockholders' equity ÷ Total debt	Measure of the relative proportion of stockholders' and of creditors' equities
<b>Profitability Tests</b>		
Rate of return on operating assets	Net operating income ÷ Operating assets or Operating margin X Turnover of operating assets	Measure of managerial effectiveness
Net income to net sales (return on sales)	Net income ÷ Net sales	Indicator of the amount of net profit on each dollar of sales
Return on average common stockholders' equity	Net income ÷ Average common stockholders' equity	Measure of what a given company earned for its stockholders from all sources as a percentage of common stockholders' investment
Cash flow margin	Net cash provided by operating activities ÷ Net sales	Measure of the ability of a firm to translate sales into cash
EPS of common stock	Earnings available to common stockholders' ÷ Weighted-average number of common shares outstanding	Measure of the return to investors
Times interest earned ratio	Income before interest and taxes ÷ Interest expense	Test of the likelihood that creditors will continue to receive their interest payments
Time preferred dividends earned ratio	Net income ÷ Annual preferred dividends	Test of the likelihood that preferred stockholders will receive their dividend each year
<b>Market Tests</b>		
Earnings yield on common stock	EPS ÷ Current market price per share of common stock	Comparison with other common stocks
Price-earnings ratio	Current market price per share of common stock ÷ EPS	Index of whether a stock is relatively cheap or expensive based on the ratio
Payout ratio on common stock	Dividend per share of common stock ÷ EPS	Index of whether company pays out a large percentage of earnings as dividends or reinvests most of its earnings
Dividend yield on common stock	Dividend per share of common stock ÷ Current market price per share of common stock	Comparisons with other common stocks
Dividend yield on preferred stock	Dividend per share of preferred stock ÷ Current market price per share of preferred stock	Comparison with other preferred stocks
Cash flow per share of common stock	Net cash provided by operating activities ÷ Average number of share of common stock outstanding	Test of ability to pay dividends and liabilities