Chapter 12
Financial Statement Analysis

REVIEW QUESTIONS

Question 12-1 (LO 12-1, 12-2)

The three types of comparisons commonly used in financial statement analysis are comparisons between companies, comparisons over time, and comparisons to industry.

Question 12-2 (LO 12-1, 12-2)

For vertical analysis, we express each item as a percentage of the same base amount, such as a percentage of sales in the income statement or as a percentage of total assets in the balance sheet. We use horizontal analysis to analyze trends in financial statement data, such as the amount of change and the percentage change, for one company over time.

Question 12-3 (LO 12-1)

Sales are commonly used as a base amount for income statement accounts. Total assets are commonly used as a base amount for balance sheet accounts.

Question 12-4 (LO 12-1)

The company that has most of its equity balance in retained earnings is likely an older and more established company. The retained earnings balance of a profitable company that pays little dividends will grow substantially over the years. **Walmart**, **Starbucks**, and **Facebook** are all good examples.

Question 12-5 (LO 12-2)

If the dollar amount of the change is small, it may not be all that important even if the percentage change is very large. For example, in a large company, a $100 change is probably not important even if it increased 1,000% from $10 to $110.

Question 12-6 (LO 12-3)

We measure income statement accounts over a period of time (like a video), while we measure balance sheet accounts at a point in time (like a photograph). Therefore, ratios that compare an income statement account with a balance sheet account should express the balance sheet account as an average of the beginning and ending balances.

Question 12-7 (LO 12-3)

Liquidity refers to a company’s ability to pay its *current* liabilities. The accounts used to calculate liquidity ratios are current assets and current liabilities. Solvency refers to a company’s ability to pay its *long-term* liabilities.

Question 12-8 (LO 12-3)

(a) Receivable turnover ratio and average collection period.
(b) Inventory turnover ratio and average days in inventory.
(c) Times interest earned ratio

Question 12-9 (LO 12-3)

(a) Good news.
(b) Bad news.
(c) Good news.
(d) Bad news.

Question 12-10 (LO 12-3)

A $100,000 purchase of inventory on account will increase current assets and current liabilities by $100,000. The new current ratio will increase to 0.92, calculated as current assets ($550,000) divided by current liabilities ($600,000).

Question 12-11 (LO 12-4)

(a) Return on assets.
(b) Profit margin.
(c) Asset turnover.

Question 12-12 (LO 12-4)

(a) Good news.
(b) Bad news.
(c) Bad news.
(d) Good news.

Question 12-13 (LO 12-4)

The return on assets and the return on equity differ due to financial leverage – the amount of debt each company carries. If a company earns a return on investment above the interest cost of borrowing, then the additional debt will benefit investors in the company. The result, as is the case for Hash Mark, Inc., is that the return on equity will exceed the return on assets.

Question 12-14 (LO 12-5)

Earnings persistence is the ability of current earnings to continue or *persist* into future years. Items that are not expected to persist, like discontinued operations, are reported separately near the bottom of the income statement.

Question 12-15 (LO 12-6)

The trend in earnings per share is favorable. Companies report discontinued operations separately near the bottom of the income statement to allow investors to see that these are one-time items that should be excluded in estimating income that will persist into future periods. Therefore, excluding the discontinued operations, earnings per share increased from $1.30 last year to $1.50 this year.

Question 12-16 (LO 12-6)

Conservative accounting practices are those that result in reporting lower income, lower assets, and higher liabilities. In contrast, aggressive accounting practices result in reporting higher income, higher assets, and lower liabilities.

Question 12-17 (LO 12-6)

A larger estimation of the allowance for uncollectible accounts, the write-down of overvalued inventory, the use of a shorter useful life for depreciation, and the recording of a contingent litigation loss are all examples of conservative accounting. They are conservative because all of these practices report lower net income.

Question 12-18 (LO 12-6)

A lower estimation of the allowance for uncollectible accounts, waiting to report an inventory write-down, choosing a longer useful life for depreciation, and waiting to record a litigation loss all are examples of more aggressive accounting. They are aggressive because all of these practices report higher net income.

Question 12-19 (LO 12-6)

All of these adjustments are conservative resulting in a lower reported net income.

Question 12-20 (LO 12-6)

All of the changes proposed near the end of the chapter improve the income statement and the balance sheet, but have no effect on cash flows. They include reducing the estimate of bad debts, eliminating a write-down of inventory, increasing the useful life or the salvage value used in calculating depreciation expense, and the elimination of the litigation liability.

BRIEF EXERCISES

Brief Exercise 12-1 (LO 12-1)

	2021		2020	
	Amount	%	Amount	%
Cash	$ 420,000	**7.0**	$ 1,050,000	**21.0**
Accounts receivable	660,000	**11.0**	300,000	**6.0**
Inventory	1,020,000	**17.0**	925,000	**18.5**
Long-term assets	3,900,000	**65.0**	2,725,000	**54.5**
Total assets	$6,000,000	**100.0**	$5,000,000	**100.0**

Brief Exercise 12-2 (LO 12-2)

	Year		Increase (Decrease)	
	2021	2020	Amount	%
Cash	$ 420,000	$ 1,050,000	**$ (630,000)**	**(60.0)**
Accounts receivable	660,000	300,000	**360,000**	**120.0**
Inventory	1,020,000	925,000	**95,000**	**10.3**
Long-term assets	3,900,000	2,725,000	**1,175,000**	**43.1**
Total assets	$6,000,000	$5,000,000	**$1,000,000**	**20.0**

Brief Exercise 12-3 (LO 12-1)

Athletic World's income before tax as a percentage of sales increased. Income before tax was 17% of sales in 2021 [100% – (48% + 35%)] compared to only 14% of sales in 2020 [100% – (56% + 30%)].

If net income as a percentage of sales increases, that does not mean that net income also increases. For example, if sales decrease 10% and net income decreases 5%, net income as a percentage of sales will increase, even though net income decreases.

Brief Exercise 12-4 (LO 12-2)

Percentage change from 2020 to 2021 = 3.8% increase
Percentage change from 2021 to 2022 = 7.4% decrease

Brief Exercise 12-5 (LO 12-2)

$1,150,000 = 1.15 x Sales in 2021
Sales in 2021 = $1,150,000 / 1.15 = $1,000,000

Brief Exercise 12-6 (LO 12-3)

Receivables turnover ratio $\dfrac{\$750{,}000}{(\$200{,}000 + \$220{,}000) / 2}$ = 3.6 times

Brief Exercise 12-7 (LO12-3)

Inventory turnover ratio $\dfrac{\$500{,}000^{*}}{(\$65{,}000 + \$75{,}000) / 2}$ = 7.1 times

*$750,000 sales minus $250,000 gross profit = $500,000 COGS

Brief Exercise 12-8 (LO12-3)

COGS must equal $980,000 to complete the inventory turnover ratio.

Inventory turnover ratio $\frac{\text{COGS}}{\$200{,}000}$ = 4.9 times

Given sales of $1,140,000 and calculating COGS of $980,000, gross profit is **$160,000**.

Sales	$1,140,000
– Cost of goods sold	980,000
= Gross profit	**$ 160,000**

Brief Exercise 12-9 (LO12-3)

Current ratio before purchase of inventory

$\frac{\$3{,}430{,}000}{\$4{,}900{,}000}$ = 0.70 to 1

Current ratio after $900,000 cash purchase of inventory

$\frac{\$3{,}430{,}000 + \$900{,}000 \text{ inventory} - \$900{,}000 \text{ cash}}{\$4{,}900{,}000}$ = 0.70 to 1

Current ratio after $900,000 purchase of inventory on account

$\frac{\$3{,}430{,}000 + \$900{,}000 \text{ inventory}}{\$4{,}900{,}000 + \$900{,}000 \text{ accounts payable}}$ = 0.75 to 1

Brief Exercise 12-10 (LO12-4)

Return on assets	$\dfrac{\$15}{(\$96 + \$104) / 2}$	= 15.0%
Profit margin	$\dfrac{\$15}{\$130}$	= 11.5%
Asset turnover	$\dfrac{\$130}{(\$96 + \$104) / 2}$	= 1.3 times

Brief Exercise 12-11 (LO12-4)

Return on assets	$\dfrac{\$130{,}000}{\$700{,}000}$	= 18.6%
Return on equity	$\dfrac{\$130{,}000}{\$700{,}000 - \$340{,}000}$	= 36.1%

Brief Exercise 12-12 (LO12-5)

Income from continuing operations	$32,000,000
Discontinued operation:	
Loss from sale of the career counseling division, net of tax	(7,500,000)
Net income	$24,500,000

Brief Exercise 12-13 (LO12-5)

1. Other expenses
2. Other expenses
3. Discontinued operations
4. Other revenues

Brief Exercise 12-14 (LO12-6)

1. Conservative
2. Aggressive
3. Aggressive

Brief Exercise 12-15 (LO12-6)

1. Conservative
2. Conservative
3. Conservative

EXERCISES

Exercise 12-1 (LO12-1, 12-2, 12-3, 12-4, 12-5, 12-6)

Items	
g	1. Vertical analysis
e	2. Horizontal analysis
a	3. Liquidity
h	4. Solvency
f	5. Discontinued operation
d	6. Quality of earnings
b	7. Conservative accounting practices
c	8. Aggressive accounting practices

Descriptions

a. A company's ability to pay its current liabilities.
b. Accounting choices that result in reporting lower income, lower assets, and higher liabilities.
c. Accounting choices that result in reporting higher income, higher assets, and lower liabilities.
d. The ability of reported earnings to reflect the company's true earnings as well as the usefulness of reported earnings to help investors predict future earnings.
e. A tool to analyze trends in financial statement data for a single company over time.
f. The sale or disposal of a significant component of a company's operations.
g. A means to express each item in a financial statement as a percentage of a base amount.
h. A company's ability to pay its long-term liabilities.

Exercise 12-2 (LO12-1)

Federer Sports Apparel
Income Statement
For the Years Ended December 31

	2022		2021	
	Amount	**%**	**Amount**	**%**
Net sales	$ 18,800,000	**100.0**	$ 15,500,000	**100.0**
Cost of goods sold	13,200,000	**70.2**	7,000,000	**45.2**
Gross profit	5,600,000	**29.8**	8,500,000	**54.8**
Operating expenses	1,600,000	**8.5**	1,200,000	**7.7**
Depreciation expense	1,000,000	**5.3**	1,000,000	**6.5**
Inventory write-down	200,000	**1.1**	0	**0.0**
Litigation expense	1,500,000	**8.0**	300,000	**1.9**
Income before tax	1,300,000	**6.9**	6,000,000	**38.7**
Income tax expense	450,000	**2.4**	2,000,000	**12.9**
Net income	$ 850,000	**4.5**	$ 4,000,000	**25.8**

Exercise 12-3 (LO12-2)

Federer Sports Apparel
Income Statement
For the Years Ended December 31

	Year		Increase (Decrease)	
	2022	**2021**	**Amount**	**%**
Revenues	$ 18,800,000	$ 15,500,000	**$3,300,000**	**21.3**
Cost of goods sold	13,200,000	7,000,000	**6,200,000**	**88.6**
Gross profit	5,600,000	8,500,000	**(2,900,000)**	**(34.1)**
Operating expenses	1,600,000	1,200,000	**400,000**	**33.3**
Depreciation expense	1,000,000	1,000,000	**0**	**0**
Inventory write-down	200,000	0	**200,000**	**N/A**
Litigation expense	1,500,000	300,000	**1,200,000**	**400**
Income before tax	1,300,000	6,000,000	**(4,700,000)**	**(78.3)**
Income tax expense	450,000	2,000,000	**(1,550,000)**	**(77.5)**
Net income	$ 850,000	$ 4,000,000	**$(3,150,000)**	**(78.8)**

Exercise 12-4 (LO12-1, 12-2)

Requirement 1

Federer Sports Apparel Balance Sheet December 31				
	2022		2021	
Assets	**Amount**	**%**	**Amount**	**%**
Cash	$ 2,300,000	**14.7**	$ 800,000	**5.8**
Accounts receivable	1,500,000	**9.6**	1,200,000	**8.8**
Inventory	2,800,000	**18.0**	1,700,000	**12.4**
Buildings	11,000,000	**70.5**	11,000,000	**80.3**
Less: Accumulated depreciation	(2,000,000)	**(12.8)**	(1,000,000)	**(7.3)**
Total assets	$15,600,000	**100.0**	$13,700,000	**100.0**
Accounts payable	$ 1,450,000	**9.3**	$ 1,700,000	**12.4**
Litigation liability	1,500,000	**9.6**	0	**0.0**
Common stock	8,000,000	**51.3**	8,000,000	**58.4**
Retained earnings	4,650,000	**29.8**	4,000,000	**29.2**
Total liabilities and stockholders' equity	$15,600,000	**100.0**	$13,700,000	**100.0**

Requirement 2

Federer Sports Apparel Balance Sheet December 31				
	Year		Increase (Decrease)	
Assets	**2022**	**2021**	**Amount**	**%**
Cash	$ 2,300,000	$ 800,000	**$1,500,000**	**187.5**
Accounts receivable	1,500,000	1,200,000	**300,000**	**25.0**
Inventory	2,800,000	1,700,000	**1,100,000**	**64.7**
Buildings	11,000,000	11,000,000	**0**	**0**
Less: Accumulated depreciation	(2,000,000)	(1,000,000)	**(1,000,000)**	**100.0**
Total assets	$15,600,000	$13,700,000	**$1,900,000**	**13.9**
Accounts payable	$ 1,450,000	$ 1,700,000	**$ (250,000)**	**(14.7)**
Litigation liability	1,500,000	0	**1,500,000**	**N/A**
Common stock	8,000,000	8,000,000	**0**	**0**
Retained earnings	4,650,000	4,000,000	**650,000**	**16.3**
Total liabilities and stockholders' equity	$15,600,000	$13,700,000	**$1,900,000**	**13.9**

Exercise 12-5 (LO12-3)

Requirement 1

Risk Ratios	Calculations	
Receivables turnover ratio	$\frac{\$19{,}310{,}000}{(\$1{,}100{,}000 + \$1{,}600{,}000) / 2}$	**= 14.3 times**
Average collection period	$\frac{365}{14.3}$	**= 25.5 days**
Inventory turnover ratio	$\frac{\$12{,}250{,}000}{(\$1{,}500{,}000 + \$2{,}000{,}000) / 2}$	**= 7.0 times**
Average days in inventory	$\frac{365}{7.0}$	**= 52.1 days**
Current ratio	$\frac{\$4{,}300{,}000}{\$1{,}920{,}000}$	**= 2.2 to 1**
Debt to equity ratio	$\frac{\$4{,}320{,}000}{\$4{,}880{,}000}$	**= 88.5%**

Requirement 2

Based on the above ratios, Adrian Express is more risky than the industry average. The receivable turnover, inventory turnover, and current ratios are close to the industry averages. However, the debt to equity ratio at 88.5% is much worse than the industry average of 50%.

Exercise 12-6 (LO12-4)

Requirement 1

Profitability Ratios	**Calculations**	
Gross profit ratio	$\frac{(\$19{,}310{,}000 - \$12{,}250{,}000)}{\$19{,}310{,}000}$	**= 36.6%**
Return on assets	$\frac{\$1{,}700{,}000}{(\$7{,}800{,}000 + \$9{,}200{,}000) / 2}$	**= 20.0%**
Profit margin	$\frac{\$1{,}700{,}000}{\$19{,}310{,}000}$	**= 8.8%**
Asset turnover	$\frac{\$19{,}310{,}000}{(\$7{,}800{,}000 + \$9{,}200{,}000) / 2}$	**= 2.3 times**
Return on equity	$\frac{\$1{,}700{,}000}{(\$3{,}540{,}000 + \$4{,}880{,}000) / 2}$	**= 40.4%**

Requirement 2

Adrian Express is less profitable than the industry average. The gross profit ratio, return on assets, profit margin, and asset turnover are all below the industry average. Return on equity of 40% is an exception, exceeding the industry average of 35%.

Exercise 12-7 (LO12-3)

Requirement 1

Risk Ratios	Calculations	
a. Receivables turnover ratio	$\frac{\$1,890,000}{(\$102,000 + \$98,000) / 2}$	**= 18.9 times**
b. Inventory turnover ratio	$\frac{\$1,394,250}{(\$90,000 + \$105,000) / 2}$	**= 14.3 times**
c. Current ratio	$\frac{\$450,000}{\$125,000}$	**= 3.6 to 1**
d. Acid-test ratio	$\frac{\$242,000 + \$98,000 + \$5,000}{\$125,000}$	**= 2.8 to 1**
e. Debt to equity ratio	$\frac{\$235,000}{\$1,157,000}$	**= 20.3%**

Requirement 2

One company can have a higher current ratio while the other has a higher acid-test ratio. The company may have a higher current ratio due to higher inventory and prepaid expenses. Inventory and prepaid expenses are less liquid than other current assets and therefore, are excluded in the calculation of the acid-test ratio.

Note that, for the same company, the current ratio will always be higher than the acid-test ratio. This is true because the current ratio includes all current assets in the numerator, while the acid-test ratio includes only cash, accounts receivable, and current investments.

Exercise 12-8 (LO12-4)

Requirement 1

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Profitability Ratios	Calculations	
a. Gross profit ratio	$\frac{\$495,750}{\$1,890,000}$	**= 26.2%**
b. Return on assets	$\frac{\$184,000}{(\$1,307,000 + \$1,392,000) / 2}$	**= 13.6%**
c. Profit margin	$\frac{\$184,000}{\$1,890,000}$	**= 9.7%**
d. Asset turnover	$\frac{\$1,890,000}{(\$1,307,000 + \$1,392,000) / 2}$	**= 1.4 times**
e. Return on equity	$\frac{\$184,000}{(\$973,000 + \$1,157,000) / 2}$	**= 17.3%**

Requirement 2

One company can have a higher return on assets while the other company has a higher return on equity. The return on equity takes into consideration leverage – the amount of debt the company has assumed. The return on assets does not consider the effects of leverage.

Exercise 12-9 (LO12-4)

Requirement 1

Profitability Ratios	Calculations	
a. Gross profit ratio	$\frac{\$14,820,000 - \$9,544,080}{\$14,820,000}$	**= 35.6%**
b. Return on assets	$\frac{\$418,000}{(\$3,600,000 + \$4,000,000) / 2}$	**= 11.0%**
c. Profit margin	$\frac{\$418,000}{\$14,820,000}$	**= 2.8%**
d. Asset turnover	$\frac{\$14,820,000}{(\$3,600,000 + \$4,000,000) / 2}$	**= 3.9 times**
e. Return on equity	$\frac{\$418,000}{(\$1,200,000 + \$1,300,000) / 2}$	**= 33.4%**

Requirement 2

Dividends paid to shareholders in 2021 were $318,000. This amount can be determined by analyzing the changes to retained earnings as follows:

Retained earnings, 2020	$300,000
+ Net income	418,000
– Dividends paid	**(318,000)**
= Retained earnings, 2021	$400,000

Exercise 12-10 (LO12-4)

Profitability Ratios	**Calculations**	
Return on assets	$\frac{\$65,700}{\$900,000}$	**= 7.3%**
Profit margin	$\frac{\$65,700}{\$540,000}$	**= 12.2%**
Asset turnover	$\frac{\$540,000}{\$900,000}$	**= 0.6 times**
Return on equity	$\frac{\$65,700}{(\$600,000 + \mathbf{\$635,700}) / 2}$	**= 10.6%**

Stockholders' equity, beginning	$600,000
+ Net income	65,700
– Dividends paid	(30,000)
= Stockholders' equity, ending	**$635,700**

Exercise 12-11 (LO12-5)

a. Other expenses

b. Discontinued operations

c. Other expenses

d. Other expenses

e. Other revenues

Exercise 12-12 (LO12-5)

LeBron's Bookstores
Income Statement
For the Year Ended December 31, 2021

Net sales	$ 11,000,000
Cost of goods sold	6,500,000
Gross profit	4,500,000
Operating expenses	3,000,000
Income before tax	1,500,000
Income tax expense	375,000
Income from continuing operations	1,125,000
Discontinued operation:	
Loss from disposal of book division, net of tax	(675,000)
Net income	$ 450,000

Exercise 12-13 (LO12-5)

Shaquille Corporation
Income Statement
For the Year Ended December 31, 2021

Operating income	$ 1,700,000
Inventory write-down	200,000
Income before tax	1,500,000
Income tax expense	425,000
Income from continuing operations	1,075,000
Discontinued operation:	
Gain from disposal of operating segment, net of tax	275,000
Net income	$ 1,350,000

Exercise 12-14 (LO12-6)

a. Conservative (lower income, lower assets)

b. Aggressive (higher income, higher assets)

c. Conservative (lower income, lower assets)

d. Aggressive (higher income, lower liabilities)

Exercise 12-15 (LO12-6)

Requirement 1

(a) Aggressive

(b) Conservative

(c) Aggressive

(d) Aggressive

(e) Aggressive

Note: Changes resulting in higher revenues or lower expenses are considered aggressive. Changes resulting in lower revenues or higher expenses are considered conservative.

Requirement 2

The total effect is neutral because net income is the same before and after the proposed changes. The conservative change of $400,000 exactly offsets the four aggressive changes totaling $400,000.

PROBLEMS: SET A

Problem 12-1A (LO12-1)

Requirement 1

Sports Emporium Income Statements For the Year Ended December 31, 2021				
	Sporting Goods		Sports Apparel	
	Amount	%	Amount	%
Net sales	$1,800,000	**100.0**	$970,000	**100.0**
Cost of goods sold	1,040,000	**57.8**	440,000	**45.4**
Gross profit	760,000	**42.2**	530,000	**54.6**
Operating expenses	450,000	**25.0**	340,000	**35.1**
Operating income	310,000	**17.2**	190,000	**19.5**
Other income (expense)	20,000	**1.1**	(15,000)	**(1.5)**
Income before tax	330,000	**18.3**	175,000	**18.0**
Income tax expense	80,000	**4.4**	70,000	**7.2**
Net income	$ 250,000	**13.9**	$105,000	**10.8**

Requirement 2

The sporting goods segment has a higher net income ($250,000) than the sports apparel segment ($105,000). Vertical analysis further indicates the sporting goods segment is more profitable since net income is 13.9% of sales in that segment compared to only 10.8% of sales in the sports apparel segment. If these results continue, Sports Emporium may want to place greater focus on the expansion of the more profitable sporting goods segment.

Problem 12-2A (LO12-2)

Requirement 1

Anything Tennis Income Statements For the Years Ended December 31				
			Increase (Decrease)	
	2021	2020	Amount	%
Net sales	$ 3,500,000	$ 2,620,000	$ 880,000	33.6
Cost of goods sold	2,150,000	1,380,000	770,000	55.8
Gross profit	1,350,000	1,240,000	110,000	8.9
Operating expenses	810,000	630,000	180,000	28.6
Operating income	540,000	610,000	(70,000)	(11.5)
Other income (expense)	10,000	6,000	4,000	66.7
Income before tax	550,000	616,000	(66,000)	(10.7)
Income tax expense	100,000	140,000	(40,000)	(28.6)
Net income	$ 450,000	$ 476,000	$ (26,000)	(5.5)

Requirement 2

Sales increased $880,000 (33.6%), but cost of goods sold increased $770,000 (55.8%), resulting in a gross profit just slightly higher than the prior year. Operating expenses increased 28.6%, which explains why operating income, income before tax, and net income fell short of the prior year.

Problem 12-3A (LO12-1, 12-2)

Requirement 1

Sports Unlimited Balance Sheet December 31, 2021				
	2021		**2020**	
Assets	**Amount**	**%**	**Amount**	**%**
Current assets:				
Cash	$ 103,500	**23.0**	$ 70,400	**17.6**
Accounts receivable	46,800	**10.4**	32,000	**8.0**
Inventory	44,550	**9.9**	71,200	**17.8**
Prepaid rent	7,200	**1.6**	3,600	**0.9**
Long-term assets:				
Investment in bonds	54,900	**12.2**	0	**0.0**
Land	117,450	**26.1**	141,600	**35.4**
Equipment	106,200	**23.6**	102,000	**25.5**
Accumulated depreciation	(30,600)	**(6.8)**	(20,800)	**(5.2)**
Total assets	$ 450,000	**100.0**	$ 400,000	**100.0**
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable	$ 30,150	**6.7**	$ 46,800	**11.7**
Interest payable	7,200	**1.6**	3,600	**0.9**
Income tax payable	12,150	**2.7**	10,000	**2.5**
Long-term liabilities:				
Notes payable	138,150	**30.7**	127,600	**31.9**
Stockholders' equity:				
Common stock	144,000	**32.0**	144,000	**36.0**
Retained earnings	118,350	**26.3**	68,000	**17.0**
Total liabilities and equity	$450,000	**100.0**	$400,000	**100.0**

Requirement 2

Sports Unlimited
Balance Sheet
December 31, 2021

	Year		Increase (Decrease)	
Assets	**2021**	**2020**	**Amount**	**%**
Current assets:				
Cash	$ 103,500	$ 70,400	**$ 33,100**	**47.0**
Accounts receivable	46,800	32,000	**14,800**	**46.3**
Inventory	44,550	71,200	**(26,650)**	**(37.4)**
Prepaid rent	7,200	3,600	**3,600**	**100.0**
Long-term assets:				
Investment in bonds	54,900	0	**54,900**	**N/A**
Land	117,450	141,600	**(24,150)**	**(17.1)**
Equipment	106,200	102,000	**4,200**	**4.1**
Accumulated depreciation	(30,600)	(20,800)	**(9,800)**	**(47.1)**
Total assets	$ 450,000	$ 400,000	**$50,000**	**12.5**
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable	$ 30,150	$ 46,800	**$(16,650)**	**(35.6)**
Interest payable	7,200	3,600	**3,600**	**100.0**
Income tax payable	12,150	10,000	**2,150**	**21.5**
Long-term liabilities:				
Notes payable	138,150	127,600	**10,550**	**8.3**
Stockholders' equity:				
Common stock	144,000	144,000	**0**	**0**
Retained earnings	118,350	68,000	**50,350**	**74.0**
Total liabilities and equity	$450,000	$400,000	**$50,000**	**12.5**

Problem 12-4A (LO12-3)

Risk Ratios	Calculations	
1. Receivables turnover ratio	$\frac{\$3,086,000}{(\$70,000 + \$91,000) / 2}$	**= 38.3 times**
2. Average collection period	$\frac{365}{38.3}$	**= 9.5 days**
3. Inventory turnover ratio	$\frac{\$1,960,000}{(\$145,000 + \$115,000) / 2}$	**= 15.1 times**
4. Average days in inventory	$\frac{365}{15.1}$	**= 24.2 days**
5. Current ratio	$\frac{\$415,000}{\$104,000}$	**= 4.0 to 1**
6. Acid-test ratio	$\frac{\$196,000 + \$91,000}{\$104,000}$	**= 2.8 to 1**
7. Debt to equity ratio	$\frac{\$399,000}{\$547,000}$	**= 72.9%**
8. Times interest earned ratio	$\frac{\$139,000 + \$20,000 + \$58,000}{\$20,000}$	**= 10.9 times**

Problem 12-5A (LO12-4)

Profitability Ratios	**Calculations**	
1. Gross profit ratio	$\frac{\$1,126,000}{\$3,086,000}$	**= 36.5%**
2. Return on assets	$\frac{\$139,000}{(\$794,200 + \$946,000) / 2}$	**= 16.0%**
3. Profit margin	$\frac{\$139,000}{\$3,086,000}$	**= 4.5%**
4. Asset turnover	$\frac{\$3,086,000}{(\$794,200 + \$946,000) / 2}$	**= 3.5 times**
5. Return on equity	$\frac{\$139,000}{(\$449,200 + \$547,000) / 2}$	**= 27.9%**
6. Price-earnings ratio	$\frac{\$28.30}{\$1.40}$	**= 20.2**

Problem 12-6A (LO12-3, 12-4)

Requirement 1

Risk Ratios		**Calculations**	
Receivables turnover ratio			
	2021	$\frac{\$3,086,000}{(\$70,000 + \$91,000) / 2}$	**= 38.3 times**
	2022	$\frac{\$3,560,000}{(\$91,000 + \$90,000) / 2}$	**= 39.3 times**
Inventory turnover ratio			
	2021	$\frac{\$1,960,000}{(\$145,000 + \$115,000) / 2}$	**= 15.1 times**
	2022	$\frac{\$2,490,000}{(\$115,000 + \$140,000) / 2}$	**= 19.5 times**
Current ratio			
	2021	$\frac{\$415,000}{\$104,000}$	**= 4.0 to 1**
	2022	$\frac{\$461,000}{\$186,000}$	**= 2.5 to 1**
Debt to equity ratio			
	2021	$\frac{\$399,000}{\$547,000}$	**= 72.9%**
	2022	$\frac{\$636,000}{\$436,000}$	**= 145.9%**

Requirement 2

Profitability Ratios	**Calculations**	
Gross profit ratio		
2021	$\frac{\$1,126,000}{\$3,086,000}$	**= 36.5%**
2022	$\frac{\$1,070,000}{\$3,560,000}$	**= 30.1%**
Return on assets		
2021	$\frac{\$139,000}{(\$794,200 + \$946,000) / 2}$	**= 16.0%**
2022	$\frac{\$33,000}{(\$946,000 + \$1,072,000) / 2}$	**= 3.3%**
Profit margin		
2021	$\frac{\$139,000}{\$3,086,000}$	**= 4.5%**
2022	$\frac{\$33,000}{\$3,560,000}$	**= 0.9%**
Asset turnover		
2021	$\frac{\$3,086,000}{(\$794,200 + \$946,000) / 2}$	**= 3.5 times**
2022	$\frac{\$3,560,000}{(\$946,000 + \$1,072,000) / 2}$	**= 3.5 times**

Requirement 3

The risk ratios are mixed. The receivables and inventory turnover ratios improved in 2022, while the current ratio and debt to equity ratio indicate greater risk in 2022.

Profitability decreased as indicated by the lower gross profit ratio and return on assets in 2022. It appears that the lower return on assets in 2022 is due to lower profit margins rather than to a decrease in asset turnover.

PROBLEMS: SET B

Problem 12-1B (LO12-1)

Requirement 1

Game-On Sports
Income Statements
For the Year Ended December 31, 2021

	Athletic Equipment		Accessories	
	Amount	**%**	**Amount**	**%**
Net sales	$3,050,000	**100.0**	$3,500,000	**100.0**
Cost of goods sold	1,350,000	**44.3**	1,670,000	**47.7**
Gross profit	1,700,000	**55.7**	1,830,000	**52.3**
Operating expenses	750,000	**24.6**	800,000	**22.9**
Operating income	950,000	**31.1**	1,030,000	**29.4**
Other income (expense)	80,000	**2.6**	(15,000)	**(0.4)**
Income before tax	1,030,000	**33.7**	1,015,000	**29.0**
Income tax expense	235,000	**7.7**	210,000	**6.0**
Net income	$ 795,000	**26.0**	$ 805,000	**23.0**

Requirement 2

The athletic equipment segment is more profitable. Net income is 26.0% of sales in that segment compared to only 23.0% of sales in the accessories segment. If these results continue, Game-On Sports may want to place greater focus on the expansion of the more profitable athletic equipment segment.

Problem 12-2B (LO12-2)

Requirement 1

Galaxy Tennis Income Statements For the Years Ended December 31				
			Increase (Decrease)	
	2021	2020	Amount	%
Net sales	$ 6,150,000	$ 6,250,000	**$ (100,000)**	**(1.6)**
Cost of goods sold	2,850,000	2,920,000	**(70,000)**	**(2.4)**
Gross profit	3,300,000	3,330,000	**(30,000)**	**(0.9)**
Operating expenses	1,510,000	1,390,000	**120,000**	**8.6**
Operating income	1,790,000	1,940,000	**(150,000)**	**(7.7)**
Other income (expense)	60,000	85,000	**(25,000)**	**(29.4)**
Income before tax	1,850,000	2,025,000	**(175,000)**	**(8.6)**
Income tax expense	390,000	435,000	**(45,000)**	**(10.3)**
Net income	$ 1,460,000	$ 1,590,000	**$(130,000)**	**(8.2)**

Requirement 2

Sales and gross profit decreased 1.6% and 0.9% respectively. However, even though sales decreased, operating expenses increased 8.6%. This resulted in decreases to operating income, income before tax, and net income around 8%.

Problem 12-3B (LO12-1, 12-2)

Requirement 1

Fantasy Football
Balance Sheet
December 31

Assets	**2021**		**2020**	
	Amount	**%**	**Amount**	**%**
Current assets:				
Cash	$ 208,000	**5.2**	$ 262,200	**6.9**
Accounts receivable	856,000	**21.4**	999,400	**26.3**
Inventory	1,900,000	**47.5**	1,349,000	**35.5**
Supplies	124,000	**3.1**	87,400	**2.3**
Long-term assets:				
Equipment	1,292,000	**32.3**	1,292,000	**34.0**
Accumulated depreciation	(380,000)	**(9.5)**	(190,000)	**(5.0)**
Total assets	$4,000,000	**100.0**	$3,800,000	**100.0**
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable	$ 168,000	**4.2**	$ 129,200	**3.4**
Interest payable	0	**0.0**	3,800	**0.1**
Income tax payable	76,000	**1.9**	76,000	**2.0**
Long-term liabilities:				
Notes payable	760,000	**19.0**	760,000	**20.0**
Stockholders' equity:				
Common stock	786,600	**19.7**	786,600	**20.7**
Retained earnings	2,209,400	**55.2**	2,044,400	**53.8**
Total liabilities and equity	$4,000,000	**100.0**	$3,800,000	**100.0**

Requirement 2

Fantasy Football Balance Sheet December 31				
	Year		Increase (Decrease)	
Assets	**2021**	**2020**	**Amount**	**%**
Current assets:				
Cash	$ 208,000	$ 262,200	**$ (54,200)**	**(20.7)**
Accounts receivable	856,000	999,400	**(143,400)**	**(14.3)**
Inventory	1,900,000	1,349,000	**551,000**	**40.8**
Supplies	124,000	87,400	**36,600**	**41.9**
Long-term assets:				
Equipment	1,292,000	1,292,000	**0**	**0**
Accumulated depreciation	(380,000)	(190,000)	**(190,000)**	**(100.0)**
Total assets	$4,000,000	$3,800,000	**$200,000**	**5.3**
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable	$ 168,000	$ 129,200	**$ 38,800**	**30.0**
Interest payable	0	3,800	**(3,800)**	**(100.0)**
Income tax payable	76,000	76,000	**0**	**0**
Long-term liabilities:				
Notes payable	760,000	760,000	**0**	**0**
Stockholders' equity:				
Common stock	786,600	786,600	**0**	**0**
Retained earnings	2,209,400	2,044,400	**165,000**	**8.1**
Total liabilities and equity	$4,000,000	$3,800,000	**$200,000**	**5.3**

Problem 12-4B

Risk Ratios	Calculations	
1. Receivables turnover ratio	$\frac{\$8,900,000}{(\$810,000 + \$790,000) / 2}$	**= 11.1 times**
2. Average collection period	$\frac{365}{11.1}$	**= 32.9 days**
3. Inventory turnover ratio	$\frac{\$5,450,000}{(\$1,075,000 + \$1,405,000) / 2}$	**= 4.4 times**
4. Average days in inventory	$\frac{365}{4.4}$	**= 83.0 days**
5. Current ratio	$\frac{\$2,469,000}{\$155,000}$	**= 15.9 to 1**
6. Acid-test ratio	$\frac{\$164,000 + \$790,000}{\$155,000}$	**= 6.2 to 1**
7. Debt to equity ratio	$\frac{\$755,000}{\$2,444,000}$	**= 30.9%**
8. Times interest earned ratio	$\frac{\$1,230,000 + \$50,000 + \$360,000}{\$50,000}$	**= 32.8 times**

Problem 12-5B (LO12-4)

Profitability Ratios	**Calculations**	
1. Gross profit ratio	$\frac{\$3{,}450{,}000}{\$8{,}900{,}000}$	**= 38.8%**
2. Return on assets	$\frac{\$1{,}230{,}000}{(\$3{,}124{,}000 + \$3{,}199{,}000) / 2}$	**= 38.9%**
3. Profit margin	$\frac{\$1{,}230{,}000}{\$8{,}900{,}000}$	**= 13.8%**
4. Asset turnover	$\frac{\$8{,}900{,}000}{(\$3{,}124{,}000 + \$3{,}199{,}000) / 2}$	**= 2.8 times**
5. Return on equity	$\frac{\$1{,}230{,}000}{(\$2{,}397{,}000 + \$2{,}444{,}000) / 2}$	**= 50.8%**
6. Price-earnings ratio	$\frac{\$22.42}{\$1.36}$	**= 16.5 times**

Problem 12-6B (LO12-3, 12-4)

Requirement 1

Risk Ratios	**Calculations**	
Receivables turnover ratio		
2021	$\dfrac{\$8,900,000}{(\$810,000 + \$790,000) / 2}$	**= 11.1 times**
2022	$\dfrac{\$10,400,000}{(\$790,000 + \$990,000) / 2}$	**= 11.7 times**
Inventory turnover ratio		
2021	$\dfrac{\$5,450,000}{(\$1,075,000 + \$1,405,000) / 2}$	**= 4.4 times**
2022	$\dfrac{\$6,800,000}{(\$1,405,000 + \$1,725,000) / 2}$	**= 4.3 times**
Current ratio		
2021	$\dfrac{\$2,469,000}{\$155,000}$	**= 15.9 to 1**
2022	$\dfrac{\$3,070,000}{\$219,000}$	**= 14.0 to 1**
Debt to equity ratio		
2021	$\dfrac{\$755,000}{\$2,444,000}$	**= 30.9%**
2022	$\dfrac{\$719,000}{\$2,851,000}$	**= 25.2%**

Requirement 2

Profitability Ratios	**Calculations**	
Gross profit ratio		
2021	$\frac{\$3,450,000}{\$8,900,000}$	**= 38.8%**
2022	$\frac{\$3,600,000}{\$10,400,000}$	**= 34.6%**
Return on assets		
2021	$\frac{\$1,230,000}{(\$3,124,000 + \$3,199,000) / 2}$	**= 38.9%**
2022	$\frac{\$1,360,000}{(\$3,199,000 + \$3,570,000) / 2}$	**= 40.2%**
Profit margin		
2021	$\frac{\$1,230,000}{\$8,900,000}$	**= 13.8%**
2022	$\frac{\$1,360,000}{\$10,400,000}$	**= 13.1%**
Asset turnover		
2021	$\frac{\$8,900,000}{(\$3,124,000 + \$3,199,000) / 2}$	**= 2.8 times**
2022	$\frac{\$10,400,000}{(\$3,199,000 + \$3,570,000) / 2}$	**= 3.1 times**

Requirement 3

Regarding risk, the receivables turnover slightly improved and the debt to equity ratio declined, which are both positive signs. However, the inventory turnover ratio and current ratio both declined in 2022.

Profitability ratios are mixed. While net income increased $130,000 in 2022, the gross profit ratio declined from 38.8% to 34.6%. Return on assets increased, profit margin declined, and asset turnover improved.

ADDITIONAL PERSPECTIVES

Continuing Problem: Great Adventures

AP12-1

Requirement 1

Note: Assume all sales and services are on credit.

Risk Ratios	**Calculations**	
a. Receivables turnover ratio	$\frac{\$164,150}{(\$47,600 + \$0) / 2}$	**= 6.9 times**
b. Average collection period	$\frac{365}{6.9}$	**= 52.9 days**
c. Inventory turnover ratio	$\frac{\$38,500}{(\$7,000 + \$0) / 2}$	**= 11.0 times**
d. Average days in inventory	$\frac{365}{11.0}$	**= 33.2 days**
e. Current ratio	$\frac{\$236,068}{\$105,064}$	**= 2.2 to 1**
f. Acid-test ratio	$\frac{\$180,568 + \$47,600}{\$105,064}$	**= 2.2 to 1**
g. Debt to equity ratio	$\frac{\$580,933}{\$991,885}$	**= 58.6%**
h. Times interest earned ratio	$\frac{\$35,835 + \$6,785 + \$14,500}{\$6,785}$	**= 8.4 times**

Requirement 2

Profitability Ratios	**Calculations**	
a. Gross profit ratio	$\frac{\$164,150 - \$38,500}{\$164,150}$	**= 76.5%**
b. Return on assets	$\frac{\$35,835}{(\$1,572,818 + \$101,000) / 2}$	**= 4.3%**
c. Profit margin	$\frac{\$35,835}{\$164,150}$	**= 21.8%**
d. Asset turnover	$\frac{\$164,150}{(\$1,572,818 + \$101,000) / 2}$	**= 0.2 times**
e. Return on equity	$\frac{\$35,835}{(\$991,885 + \$53,450) / 2}$	**= 6.9%**

Financial Analysis: American Eagle

AP12-2

($ in thousands)

Requirement 1

Risk Ratios	Calculations	
a. Receivable turnover ratio	$3,795,549 / (($78,304 + $86,634) / 2)	= 46.0 times
b. Average collection period	365 / 46.0	= 7.9 days
c. Inventory turnover ratio	$2,425,044 / (($398,213 + $358,446) / 2)	= 6.4 times
d. Average days in inventory	365 / 6.4	= 57.0 days
e. Current ratio	$968,530 / $485,221	= 2.0
f. Acid-test ratio	($413,613 + $0 +$78,304) / $485,221	= 1.0
g. Debt to equity ratio	$569,522 / $1,246,791	= 45.7%

Requirement 2

Profitability Ratios	**Calculations**	
a. Gross profit ratio	$\dfrac{\$1{,}370{,}505}{\$3{,}795{,}549}$	**= 36.1%**
b. Return on assets	$\dfrac{\$204{,}163}{(\$1{,}816{,}313 + 1{,}782{,}660) / 2}$	**= 11.3%**
c. Profit margin	$\dfrac{\$204{,}163}{\$3{,}795{,}549}$	**= 5.4%**
d. Asset turnover	$\dfrac{\$3{,}795{,}549}{(\$1{,}816{,}313 + 1{,}782{,}660) / 2}$	**= 2.1 times**
e. Return on equity	$\dfrac{\$204{,}163}{(\$1{,}246{,}791 + \$1{,}204{,}569) / 2}$	**= 16.7%**

Financial Analysis: The Buckle

AP12-3

($ in thousands)

Requirement 1

Risk Ratios	**Calculations**	
a. Receivable turnover ratio	$\frac{\$913{,}380}{(\$8{,}588 + \$8{,}210) / 2}$	**= 108.7 times**
b. Average collection period	$\frac{365}{108.7}$	**= 3.4 days**
c. Inventory turnover ratio	$\frac{\$533{,}357}{(\$118{,}007 + \$125{,}694) / 2}$	**= 4.4 times**
d. Average days in inventory	$\frac{365}{4.4}$	**= 83.0 days**
e. Current ratio	$\frac{\$360{,}584}{\$97{,}906}$	**= 3.7**
f. Acid-test ratio	$\frac{\$165{,}086 + \$50{,}833 + \$8{,}588}{\$97{,}906}$	**= 2.3**
g. Debt to equity ratio	$\frac{\$146{,}868}{\$391{,}248}$	**= 37.5%**

Requirement 2

Profitability Ratios	Calculations	
a. Gross profit ratio	$380,023 / $913,380	= 41.6%
b. Return on assets	$89,707 / (($538,116 + $579,847) / 2)	= 16.0%
c. Profit margin	$89,707 / $913,380	= 9.8%
d. Asset turnover	$913,380 / (($538,116 + $579,847) / 2)	= 1.6 times
e. Return on equity	$89,707 / (($391,248 + $430,539) / 2)	= 21.8%

Comparative Analysis: American Eagle vs. The Buckle

AP12-4

($ in thousands)

Requirement 1

American Eagle

Risk Ratios	Calculations	
a. Receivable turnover ratio	$\frac{\$3,795,549}{(\$78,304 + \$86,634) / 2}$	**= 46.0 times**
b. Average collection period	$\frac{365}{46.0}$	**= 7.9 days**
c. Inventory turnover ratio	$\frac{\$2,425,044}{(\$398,213 + \$358,446) / 2}$	**= 6.4 times**
d. Average days in inventory	$\frac{365}{6.4}$	**= 57.0 days**
e. Current ratio	$\frac{\$968,530}{\$485,221}$	**= 2.0**
f. Acid-test ratio	$\frac{\$413,613 + \$0 + \$78,304}{\$485,221}$	**= 1.0**
g. Debt to equity ratio	$\frac{\$569,522}{\$1,246,791}$	**= 45.7%**

The Buckle

Risk Ratios	**Calculations**	
a. Receivable turnover ratio	$\frac{\$913,380}{(\$8,588 + \$8,210) / 2}$	**= 108.7 times**
b. Average collection period	$\frac{365}{108.7}$	**= 3.4 days**
c. Inventory turnover ratio	$\frac{\$533,357}{(\$118,007 + \$125,694) / 2}$	**= 4.4 times**
d. Average days in inventory	$\frac{365}{4.4}$	**= 83.0 days**
e. Current ratio	$\frac{\$360,584}{\$97,906}$	**= 3.7**
f. Acid-test ratio	$\frac{\$165,086 + \$50,833 + \$8,588}{\$97,906}$	**= 2.3**
g. Debt to equity ratio	$\frac{\$146,868}{\$391,248}$	**= 37.5%**

Buckle appears more risky based on the inventory turnover and average days in inventory.

American Eagle appears more risky based on the receivable turnover ratio, average collection period, current ratio, acid-test ratio, and debt to equity ratio.

Requirement 2

American Eagle

Profitability Ratios	Calculations	
a. Gross profit ratio	$\dfrac{\$1,370,505}{\$3,795,549}$	= 36.1%
b. Return on assets	$\dfrac{\$204,163}{(\$1,816,313 + 1,782,660) / 2}$	= 11.3%
c. Profit margin	$\dfrac{\$204,163}{\$3,795,549}$	= 5.4%
d. Asset turnover	$\dfrac{\$3,795,549}{(\$1,816,313 + 1,782,660) / 2}$	= 2.1 times
e. Return on equity	$\dfrac{\$204,163}{(\$1,246,791 + \$1,204,569) / 2}$	= 16.7%

The Buckle

Profitability Ratios	**Calculations**	
a. Gross profit ratio	$\frac{\$380,023}{\$913,380}$	**= 41.6%**
b. Return on assets	$\frac{\$89,707}{(\$538,116 + \$579,847) / 2}$	**= 16.0%**
c. Profit margin	$\frac{\$89,707}{\$913,380}$	**= 9.8%**
d. Asset turnover	$\frac{\$913,380}{(\$538,116 + \$579,847) / 2}$	**= 1.6 times**
e. Return on equity	$\frac{\$89,707}{(\$391,248 + \$430,539) / 2}$	**= 21.8%**

American Eagle appears more profitable based on the asset turnover ratio.

Buckle appears more profitable based on the gross profit ratio, return on assets, profit margin, and return on equity.

Ethics

AP12-5

1. The debt to equity ratio would be lower.
The debt to equity ratio is the ratio of total liabilities to total equity. The warranty adjustment causes liabilities to increase and expenses to increase (and therefore equity to decrease). By not making the adjustment, the numerator (total liabilities) is lower, and the denominator (total equity) is higher. The result is the debt to equity ratio would be lower if the adjustment is not made.

The gross profit ratio would be higher.
The gross profit ratio is the ratio of gross profit to net sales. Gross profit is net sales revenue minus cost of goods sold. The inventory adjustment causes cost of goods sold to increase (and therefore gross profit to decrease) and total assets to decrease. By not making the adjustment, the numerator (gross profit) is higher, and the denominator (net sales) is unaffected. The result is the gross profit ratio would be higher if the adjustment is not made.

The profit margin would be higher.
Profit margin is the ratio of net income to net sales. The depreciation adjustment causes expenses to increase (and therefore net income to decrease) and total assets to decrease. By extending the estimated service life, the numerator (net income) is higher, and the denominator (net sales) is unaffected. The result is the profit margin would be higher if the adjustment is not made.

2. The company will appear riskier and less profitable if the adjustments are kept.
The warranty adjustment increases the debt to equity ratio, indicating greater risk. The inventory adjustment decreases the gross profit ratio, and the shorter useful life used for the depreciable asset decreases the profit margin. Both of these lower ratios indicate lower profitability.

3. Yes.
By not making the adjustments, stockholders may perceive the company as too profitable, and lenders may perceive the company as having too little risk. Management is affected by possibly now being able to receive their bonuses.

4. No.
Each of these adjustments is required and appropriate. Estimated amounts are reasonable and consistent with prior practices.

Internet Research

AP12-6

This case provides an opportunity for students to examine ratios calculated for a company of their choice and a competitor in the same industry. It also allows students to evaluate risk and profitability ratios between two competing companies. Answers to the assignment will vary depending on the companies chosen.

Written Communication

AP12-7

Roseburg Corporation sells timber tracts for $30 million in 2021 that were purchased for $20 million in 2017. The $10 million gain on sale is recorded as:

	Debit	Credit
Cash	**30,000,000**	
Timber tracts		**20,000,000**
Gain		**10,000,000**
(To record gain on sale)		

The issue is whether to record the $10 million gain on sale in the income statement as part of operating income, "other revenues and expenses," or discontinued operations. Roseburg might prefer to report the large gain as part of operating income as it would make their operations appear more profitable. However, the sale of the timber tracts is not part of their ordinary operations of manufacturing cardboard containers. The sale or disposal of most long-term assets is reported as other revenues and expenses. This seems to be the best alternative as the sale of timber tracts is not part of ordinary operations. If the sale of the timber tracts qualified as a significant separate business segment having a major impact on the company's operations and financial results, the $10 million gain would be reported at the bottom of the income statement as discontinued operations. This does not appear to be the case, as the timber tracts appear to be an asset investment more than a separate business operation.

In summary, the $10 million gain might be reported as part of operating income, "other revenues and expenses," or discontinued operations. However, the best alternative in this situation is to report the $10 million gain as part of "other revenues and expenses."

Earnings Management

AP 12-8

Requirement 1

(a) Aggressive

(b) Aggressive

(c) Aggressive

(d) Aggressive

Requirement 2

Decrease.
All four adjustments decrease expenses in the current year which, in turn, increases net income.

Requirement 3

None.
Each of the four adjustments improves the *appearance* of amounts reported in the income statement and the balance sheet, but none of the adjustments affects the cash balance.

Requirement 4

Yes.
All four of the year-end adjustments increase income. It may be that all four adjustments are perfectly legitimate, but it also may be an indication management is inflating earnings. Year-end adjustments, especially those with an increasing or decreasing pattern, should be investigated with greater skepticism.