Corporate Finance Online (Eakins/McNally)
Chapter 2 Financial Statements and Ratio Analysis

2.1 LO1: Know the Three Financial Statements Needed for Financial Analysis

1) Using financial information to aid in decision making is called
A) "what-if" analysis.
B) factor analysis.
C) financial analysis.
D) quantitative analysis.
E) managerial economics.
Answer: C
Comment: Financial analysis is the process of using financial information to assist in investment and financial decision making.
Diff: 1
Section: 1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

2) Which of the following is not a commonly used source of information for financial analysis?
A) A consultant's analysis of industry conditions
B) Key employees' guesses about future trends
C) The Securities and Exchange Commission's filings
D) The firm's annual report
E) The economic data from a forecasting firm
Answer: B
Comment: Financial analysis is the process of using financial information to assist in investment and financial decision making.
Diff: 1
Section: 1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

3) Which of the following is one of the financial statements critical to financial statement analysis?
A) 8-K
B) SEC registration statement
C) Disclosure
D) 10-Q
E) Statement of Cash Flows
Answer: E
Comment: The three financial statements critical to analysis are the balance sheet, the income statement, and the statement of cash flows.
Diff: 1
Section: 1.1
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Learning Outcome: F-02: Analyze the major types of financial statements

4) Which of the following is a variation of the accounting identity?
A) Assets − Fixed assets = Equity − Liabilities
B) Owner's equity = Assets − Liabilities
C) Equity − Liabilities = Assets
D) Assets + Equity = Liabilities
E) Assets + Lease obligations = Equity + Liabilities
Answer: B
Comment: Assets = Liabilities + Owners' Equity
Diff: 1
Section: 1.1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

5) Balance sheets
A) show how the firm raised funds to purchase assets.
B) report a firm's activities over a period of time.
C) describe a firm's cash flows.
D) provide information about a firm's labor costs.
E) may not balance if the firm suffered a net loss.
Answer: A
Comment: Liabilities and owners' equity provide the funds for the purchase of assets.
Diff: 1
Section: 1.1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

6) The right-hand side of the balance sheet shows
A) the cash flow generated by a firm's assets.
B) how the firm financed its assets.
C) the level of accumulated depreciation.
D) profits earned by the firm in the current period.
E) the firm's good will.
Answer: B
Comment: Right-hand side shows liabilities and owners equity.
Diff: 1
Section: 1.1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

7) The ________ is a snapshot of the firm at a particular point in time.
A) income statement
B) statement of cash flows
C) statement of retained earnings
D) balance sheet
E) None of the above
Answer: D
Comment: The balance sheet is a financial snapshot of the firm.
Diff: 1
Section: 1.1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

8) An income statement contains all of the following EXCEPT
A) revenues.
B) assets.
C) losses.
D) gains.
E) expenses.
Answer: B
Comment: Income statements show revenues—expenses which result in losses or gains.
Diff: 1
Section: 1.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

9) Which of the following is not included in a cash flow statement?
A) Labor productivity
B) Interest earnings
C) Cash flow from operations
D) Depreciation expense
E) The increase in long-term debt
Answer: A
Comment: The statement of cash flows only deals with cash inflows and outflows.
Diff: 1
Section: 1.3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

2.2 LO2: Know the Goals of Financial Statement Analysis

1) Section 2.2 has no questions.

2.3 LO3: Perform Financial Statement Analysis

1) In cross-sectional analysis, a firm's financial ratios are
A) judged against the performance of firms in the same industry.
B) compared with the firm's ratios from the most recent period.
C) compared with ratios from all firms.
D) compared with a general standard.
E) plotted over time to isolate trends.
Answer: A
Comment: Cross sectional analysis is the comparison of one firm to other similar firms.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

2) The four-digit codes used by the government to classify firms into industries are known as
A) ratio standards.
B) EIC codes.
C) USIC codes.
D) financial benchmarks.
E) SIC codes.
Answer: E
Comment: Standard Industrial Classification (SIC) codes are four-digit codes given to firms by the government.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

3) When financial ratios are compared to financial ratios from previous years, a ________ is conducted.
A) cross-time
B) SIC code
C) time series
D) cross-sectional
E) None of the above
Answer: C
Comment: A time series analysis involves comparing the firm's current performance to prior periods.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

4) All of the following are problems with cross-sectional financial analysis EXCEPT that
A) an industry may be dominated by a few firms.
B) annual reports sometimes do not disclose divisional financial data.
C) many firms are conglomerates.
D) it provides no basis for comparison to other firms.
E) there may be no obvious firms to be used for comparison.
Answer: D
Comment: All of the following are problems with cross-sectional financial analysis except that it provides no basis for comparison to other firms.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

5) In common-size financial statements,
A) all balance sheet items are divided by total liabilities.
B) total sales are divided by total assets.
C) depreciation expense is divided by total sales.
D) accrued taxes are divided by total sales.
E) net income is divided by total assets.
Answer: C
Comment: Common-sized income statements are prepared by dividing each line item by sales.
Diff: 1
Section: 3.7
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

6) Each of the following is a ratio category EXCEPT
A) productivity ratios.
B) market ratios.
C) liquidity ratios.
D) financing ratios.
E) activity ratios.
Answer: A
Comment: Ratios are grouped into categories: Profitability, Liquidity, Activity, Financing, and Market.
Diff: 1
Section: 3.1
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

7) ________ ratios measure the efficiency with which assets are converted to sales or cash.
A) Liquidity
B) Activity
C) Profitability
D) Market
E) Financing
Answer: B
Comment: Activity ratios measure the efficiency with which assets are converted to sales or cash.
Diff: 1
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

8) Find the return on assets if net income was $55,000, total assets are $115,000, EBIT was $100,000, and equity is $75,000.
A) 73.3%
B) 63.1%
C) 87.0%
D) 47.8%
E) 55.0%
Answer: D
Comment: Return on assets = $\frac{\text{Net income after tax}}{\text{Total assets}}$

Return on assets = $\frac{55{,}000}{115{,}000}$ = 47.8%

Diff: 2
Section: 3.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

9) What is the return on equity if net income was $55,000, total assets are $115,000, EBIT was $100,000, and equity is $75,000?
A) 47.8%
B) 63.1%
C) 73.3%
D) 87.0%
E) 55.0%
Answer: C
Comment: Return on equity = $\frac{\text{Net income after tax}}{\text{Common equity}}$

Return on equity = $\frac{55{,}000}{75{,}000}$ = 73.3%

Diff: 2
Section: 3.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

10) Sales for a firm are $500,000, cost of goods sold are $400,000, and interest expenses are $20,000. What is the gross profit margin?
A) 16.0%
B) 20.0%
C) 4.0%
D) 25.0%
E) 30.0%
Answer: B
Comment: Gross profit margin = $\frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}$

Gross profit margin = $\frac{500{,}000 - 400{,}000}{500{,}000} = 20\%$

Diff: 2
Section: 3.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

11) If net income was $10,000, interest expense was $4,000, and taxes were $1,000, what is the operating profit margin if sales were $50,000?
A) 28%
B) 30%
C) 22%
D) 10%
E) 20%
Answer: B
Comment: Operating profit margin = $\frac{\text{Operating profits}}{\text{Sales}}$

Operating profit margin = $\frac{10{,}000 + 4{,}000 + 1{,}000}{50{,}000} = 30\%$

Diff: 2
Section: 3.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

12) If net income after tax was $10,000, interest expense was $4,000, and taxes were $1,000, what is the net profit margin if sales were $50,000?
A) 10%
B) 30%
C) 22%
D) 28%
E) 20%
Answer: E
Comment: Net profit margin = $\frac{\text{Net income after tax}}{\text{Sales}}$

Net profit margin = $\frac{10{,}000}{50{,}000}$ = 20%

Diff: 2
Section: 3.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

13) The quick ratio improves upon the current ratio by
A) using more up-to-date information.
B) simplifying the calculation.
C) subtracting intangible assets like goodwill.
D) recognizing that inventory is the current asset that is easiest to value.
E) recognizing that inventory is the least liquid current asset.
Answer: E
Comment: Since inventory may not always be easily converted into cash, the quick ratio is a more conservative measure of liquidity.
Diff: 1
Section: 3.3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

14) What is the quick ratio if cash is $10,000, accounts receivable are $25,000, inventories are $30,000, accounts payable are $40,000, and accrued payroll is $15,000?
A) 2.00
B) 1.18
C) 0.73
D) 1.13
E) 0.09
Answer: E
Comment: Quick ratio = $\frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$

Quick ratio = $\frac{10{,}000 + 25{,}000 - 30{,}000}{40{,}000 + 15{,}000}$ = 0.09

Diff: 3
Section: 3.3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

15) What is the current ratio if cash is $10,000, accounts receivable are $25,000, inventories are $30,000, accounts payable are $40,000, and accrued payroll is $15,000?
A) 2.00
B) 1.18
C) 1.13
D) 0.64
E) 0.73
Answer: B
Comment: Current ratio = $\frac{\text{Current assets}}{\text{Current liabilities}}$

Current ratio = $\frac{10{,}000 + 25{,}000 + 30{,}000}{40{,}000 + 15{,}000}$ = 1.18

Diff: 3
Section: 3.3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

16) The quick ratio is 1.0. Current assets are $100,000 and current liabilities are $80,000. What is the amount in the inventory account?
A) $20,000
B) $80,000
C) $125,000
D) $180,000
E) Cannot be determined with the information provided.
Answer: A
Comment: Quick ratio = $\frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$

1 = $\frac{100{,}000 - X}{80{,}000}$

80,000 = 100,000 - X
X = 20,000
Diff: 3
Section: 3.3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

17) Find accounts receivable turnover if a firm has an accounts receivable of $80,000, a total asset turnover of .75, and total assets of $230,000.
A) 2.15
B) 3.8
C) 2.9
D) 1.5
E) .65
Answer: A
Comment: Accounts receivable turnover = $\frac{\text{Sales}}{\text{Accounts receivable}}$

Step 1 - Use total asset turnover to calculate sales.
Total asset turnover = $\frac{\text{Sales}}{\text{Total assets}}$

$.75 = \frac{\text{Sales}}{230{,}000}$

Sales = 172,500

Step 2 - Use the sales figure to solve for accounts receivable turnover.
Accounts receivable turnover = $\frac{172{,}500}{80{,}000} = 2.15$

Diff: 3
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

18) Which of the following statements is true?
A) The quick ratio is classified as an activity ratio.
B) Current assets are expected to be converted into cash in less than 2 years.
C) A firm's debt holders prefer a low quick ratio.
D) Activity ratios go hand in hand with liquidity ratios
E) Lower current ratios are always preferable.
Answer: D
Comment: Activity ratios go hand in hand with liquidity ratios
Diff: 1
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

19) What is a firm's total asset turnover if its fixed assets are $120,000, current assets are $30,000, current liabilities are $44,000, sales were $200,000, and net income was $75,000?
A) 0.5 times
B) 2.2 times
C) 1.3 times
D) 2.0 times
E) 1.7 times
Answer: C
Comment: Total asset turnover = $\frac{\text{Sales}}{\text{Total assets}}$

Total asset turnover = $\frac{200{,}000}{120{,}000 + 30{,}000}$ = 1.3

Diff: 3
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

20) A firm has current assets of $350,000, current liabilities of $200,000, cost of goods sold of $250,000, and inventory of $75,000. The firm's inventory turnover is
A) 5.0 times.
B) 3.3 times.
C) 2.7 times.
D) 2.0 times.
E) 4.7 times.
Answer: B
Comment: Inventory turnover = $\frac{\text{Cost of goods sold}}{\text{Inventory}}$

Inventory turnover = $\frac{250{,}000}{75{,}000}$ = 3.3

Diff: 2
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

21) What is a firms times interest earned if it posts revenues of $200,000, taxes of $35,000, expenses of $100,000, and interest of $30,000
A) 3.3 times
B) 2.0 times
C) 2.2 times
D) 0.5 times
E) 1.3 times
Answer: A
Comment: Times interest earned = $\frac{\text{Earnings before interest and taxes}}{\text{Interest}}$

Times interest earned = $\frac{200{,}000 - 100{,}000}{30{,}000} = 3.3$

Diff: 3
Section: 3.5
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

22) If a firm's total asset turnover is low, but its fixed asset turnover is high, which of the following ratios should an analyst examine to locate the source of the problem?
A) Debt/equity
B) Price/earnings
C) Return on equity
D) Accounts receivable turnover
E) Times interest earned
Answer: D
Comment: Accounts receivable is a part of total assets and is a logical next step to check if fixed assets turnover is high.
Diff: 1
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

23) A firm has sales of $1 million, net income of $250,000, total current assets of $300,000, and accounts receivable of $200,000. The firm's accounts receivable turnover is
A) 0.33 times.
B) 0.20 times.
C) 1.50 times.
D) 5.00 times.
E) 1.25 times.
Answer: D
Comment: Accounts receivable turnover = $\frac{\text{Sales}}{\text{Accounts receivable}}$

Accounts receivable turnover = $\frac{1{,}000{,}000}{200{,}000} = 5$

Diff: 2
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

24) A firm has accounts receivable of $150,000. During the year, total sales are $500,000, of which $300,000 are cash sales. What is the average collection period?
A) 109.5 days
B) 182.5 days
C) 273.8 days
D) 486.7 days
E) None of the above
Answer: C
Comment: Average collection period = $\frac{\text{365 days}}{\text{Receivables turnover}}$

Average collection period = $\frac{\text{365 days}}{(200{,}000 / 150{,}000)}$ = 273.8 days

Diff: 3
Section: 3.4
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

25) What is a firm's debt ratio if its total assets are $135,000, equity is $75,000, current liabilities are $24,000, and total liabilities are $105,000?
A) 140%
B) 110%
C) 50%
D) 60%
E) 78%
Answer: E
Comment: Debt ratio = $\frac{\text{Total liabilities}}{\text{Total assets}}$

Debt ratio = $\frac{105{,}000}{135{,}000}$ = 78%

Diff: 2
Section: 3.5
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

26) Market ratios differ from other ratios because
A) they are based on information not contained in the firm's financial statements.
B) they are the only ratios that may have negative values.
C) they are the most important ratios to shareholders.
D) they are the only ratios that relate equity measures to other variables.
E) they are less precise.
Answer: A
Comment: Market ratios are distinct from other ratios in that they are based, at least in part, on information not contained in the firm's financial statements.
Diff: 1
Section: 3.6
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

27) If a firm has 100,000 shares of common stock outstanding and has just recorded a $45,000 profit, what is its price/earnings ratio if its current share price is $35?
A) 0.78
B) 0.45
C) 14.00
D) 45.00
E) 78.00
Answer: E
Comment: PE ratio = $\frac{\text{Market price of common stock}}{\text{Earnings per share}}$

PE ratio = $\frac{\$35}{(\$45{,}000 / 100{,}000)} = 78$

Diff: 2
Section: 3.6
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

28) The DuPont analysis calculates ROE as the product of
A) leverage, market value, and turnover.
B) margin, turnover, and leverage.
C) profitability, liquidity, and leverage.
D) activity, leverage, and debt.
E) margin, profitability, and leverage.
Answer: B
Comment: ROE = Net Profit Margin × Total Asset Turnover × Equity Multiplier
Diff: 1
Section: 3.8
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

29) All of the following are part of a financial analysis EXCEPT
A) examining the strengths and weaknesses of the firm.
B) performing a means-end analysis.
C) calculating the DuPont ratio.
D) analyzing the competition.
E) performing an industry analysis.
Answer: B
Comment: Financial analysis of a firm includes analyzing the economy, the industry, the competitors, and the strengths and weaknesses of the firm.
Diff: 1
Section: 3.9
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

30) Ratio interaction refers to
A) using multiple ratios to make a decision.
B) the way ratios are affected by managerial decisions.
C) how ratios affect managerial decisions.
D) the effect one ratio has on another.
E) when a ratio raises a red flag for analysts.
Answer: D
Comment: Ratio interaction refers to the effect one ratio has on another.
Diff: 1
Section: 3.9
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

31) Which type of ratio measures how effectively the firm uses its resources to generate income?
A) Activity
B) Liquidity
C) Profitability
D) Leverage
E) Market
Answer: C
Comment: Profitability ratios measure how effectively the firm uses its resources to generate income.
Diff: 1
Section: 3.2
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

32) When would the "return on equity" equal the "return on assets"?
A) Whenever the debt to equity ratio is one
B) Whenever the debt ratio is zero
C) Whenever a firm has positive net worth
D) Whenever the firm has positive net worth and positive net income
Answer: B
Comment: If you recall from the section on the Du Pont Analysis,
$ROE = ROA \times (1 + \frac{\text{Debt}}{\text{Equity}})$
So, in order for ROE = ROA the debt to equity ratio must equal zero. Debt in the Du Pont system is equal to total liabilities. The debt ratio is defined as total liabilities over total assets. If the debt ratio is zero, then debt in the Du Pont system is zero and D/E = 0.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

33) Your banker is concerned about your company's liquidity. Which of the following actions would increase the firm's current ratio and ease the bank's concern?
A) Sell some inventory for cash.
B) File for bankruptcy.
C) Call your convertible bonds and thereby force the bond holders to become shareholders.
D) Sell some of the firm's long-term bonds and purchase marketable securities.
E) Sell long-term bonds to purchase new machinery.
Answer: D
Comment: The current ratio is calculated as current assets/current liabilities.
Any action to increase current assets and/or decrease current liabilities will improve the ratio. The correct answer in this case is the choice of selling the long-term bonds and purchasing marketable securities as it is the option that results in the best net change in either of the current ratio variables (in this case current assets).
Diff: 2
Section: 3
AACSB: Analytical Skills
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Blockbuster Inc.
Balance Sheet for year-ended Dec 31 ($000's)

ASSETS	Year 1	Year 2
Cash	194,200	200,200
Accounts Receivables	185,800	150,000
Inventory	242,200	202,900
Other Current Assets	177,300	163,300
Total Current Assets	799,500	716,400
Fixed Assets		
Long Term Investments	214,100	159,500
PP&E	1,079,400	909,000
Goodwill	6,455,900	5,967,500
Total Fixed Assets	7,749,400	7,036,000
Total Assets	8,548,900	7,752,400
LIABILITIES AND SHAREHOLDERS' EQUITY		
Accounts Payable	1,090,400	1,087,400
Short-term Debt	32,800	181,400
Total Current Liabilities	1,123,200	1,268,800
Long-term Debt	1,417,300	734,900
Total Liabilities	2,540,500	2,003,700
Shareholders' Equity		
Common Stock	6,095,200	6,075,800
Retained Earnings	-86,800	-327,100
Total Stockholder Equity	6,008,400	5,748,700
Total Liabilities and Shareholders' Equity	8,548,900	7,752,400

34) **Blockbuster Inc.**

Income Statement for year-ended Dec 31 ($000's)

	Year 1	Year 2
Sales	4,969,100	5,157,600
COGS	2,036,000	2,420,700
SG&A	2,390,600	2,532,400
Depreciation	279,000	246,600
Amortization of Intangibles	180,100	176,100
Operating Income (Loss)	83,400	-218,200
Interest Expense	116,500	78,200
Income Before Tax	-33,100	-296,400
Income Tax Expense	45,400	-56,100
Net Income	-78,500	-240,300

Referring to the Blockbuster financial statements, what is the change in ROE from Year 1 to Year 2? ($\Delta ROE = ROE_2 - ROE_1$)

A) -4.80%
B) -4.18%
C) -2.87%
D) -1.20%
E) -1.17%

Answer: C

Comment: $ROE = \frac{\text{Net Income After Tax}}{\text{Common Equity}}$

ROE Year 1 = $\frac{-\$78,500}{\$6,008,400}$ = -1.31%

ROE Year 2 = $\frac{-\$240,300}{\$5,748,700}$ = -4.18%

Change = -4.18% --1.31% = -2.87%

Diff: 2

Section: 3

AACSB: Analytical Skills

Learning Outcome: F-02: Analyze the major types of financial statements

35) **Blockbuster Inc.**

Income Statement for year-ended Dec 31 ($000's)

	Year 1	Year 2
Sales	4,969,100	5,157,600
COGS	2,036,000	2,420,700
SG&A	2,390,600	2,532,400
Depreciation	279,000	246,600
Amortization of Intangibles	180,100	176,100
Operating Income (Loss)	83,400	-218,200
Interest Expense	116,500	78,200
Income Before Tax	-33,100	-296,400
Income Tax Expense	45,400	-56,100
Net Income	-78,500	-240,300

Referring to the Blockbuster financial statements, what is the change in ROA from Year 1 to Year 2?
($\Delta ROA = ROA_2 - ROA_1$)

A) -8.40%
B) -7.54%
C) -2.18%
D) 8.40%
E) 23.72%
Answer: C
Comment: $ROA = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$

ROA Year 1 = $\frac{-\$78{,}500}{\$8{,}548{,}900}$ = -0.92%

ROA Year 2 = $\frac{-\$240{,}300}{\$7{,}752{,}400}$ = -3.10%

Change = -3.10% - -0.92% = -2.18%
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

36) **Blockbuster Inc.**

Income Statement for year-ended Dec 31 ($000's)

	Year 1	Year 2
Sales	4,969,100	5,157,600
COGS	2,036,000	2,420,700
SG&A	2,390,600	2,532,400
Depreciation	279,000	246,600
Amortization of Intangibles	180,100	176,100
Operating Income (Loss)	83,400	-218,200
Interest Expense	116,500	78,200
Income Before Tax	-33,100	-296,400
Income Tax Expense	45,400	-56,100
Net Income	-78,500	-240,300

Referring to the Blockbuster financial statements, which of the following ratios decreased from Year 1 to Year 2:

I. Equity Multiplier
II. Net Profit Margin
III. Total Asset Turnover

A) I
B) II
C) III
D) I & II
E) II & III

Answer: D

Comment: Equity Multiplier = $\frac{\text{Total Assets}}{\text{Common Equity}}$

Net Profit Margin = $\frac{\text{Net Income After Tax}}{\text{Sales}}$

Total Asset Turnover = $\frac{\text{Sales}}{\text{Total Assets}}$

	Year 1	Year 2	Change
Multiplier	= 8,548,900 / 6,008,400 = 1.42	= 7,752,400 / 5,748,700 = 1.35	-0.07
NPM	= -$78,500/$4,969,100 = -1.58%	= -240,300 / 5,157,600 = -4.66%	-3.08%
TAT	= 4,969,100 / 8,548,900 = 0.58	= 5,157,600 / 7,752,400 = 0.67	+0.09

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

37) **Blockbuster Inc.**

Income Statement for year-ended Dec 31 ($000's)

	Year 1	Year 2
Sales	4,969,100	5,157,600
COGS	2,036,000	2,420,700
SG&A	2,390,600	2,532,400
Depreciation	279,000	246,600
Amortization of Intangibles	180,100	176,100
Operating Income (Loss)	83,400	-218,200
Interest Expense	116,500	78,200
Income Before Tax	-33,100	-296,400
Income Tax Expense	45,400	-56,100
Net Income	-78,500	-240,300

Referring to the Blockbuster financial statements, what is the change in Gross Margin from Year 1 to Year 2? ($\Delta GM = GM_2 - GM_1$)

A) -7.54%
B) -5.96%
C) -2.28%
D) 5.96%
E) 7.54%
Answer: B
Comment: Gross Margin = $\frac{\text{Sales} - \text{COGS}}{\text{Sales}}$

Gross Margin Year 1 = $\frac{(4{,}969 - 2{,}036)}{4{,}969}$ = 0.5903

Gross Margin Year 2 = $\frac{(5{,}158 - 2{,}421)}{5{,}158}$ = 0.5307

Change = 0.5307 - 0.5903 = -5.96%
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

38) **Blockbuster Inc.**

Income Statement for year-ended Dec 31 ($000's)

	Year 1	Year 2
Sales	4,969,100	5,157,600
COGS	2,036,000	2,420,700
SG&A	2,390,600	2,532,400
Depreciation	279,000	246,600
Amortization of Intangibles	180,100	176,100
Operating Income (Loss)	83,400	-218,200
Interest Expense	116,500	78,200
Income Before Tax	-33,100	-296,400
Income Tax Expense	45,400	-56,100
Net Income	-78,500	-240,300

Referring to the Blockbuster financial statements, what is the most important underlying reason for the change in ROE?

A) Decrease in cost of goods sold
B) Increase in debt caused the debt/equity ratio to rise
C) Increase in sales resulted in an increase in product returns which caused inventory turnover to decline
D) Increase in cost of goods sold caused a big drop in gross margin
E) Decrease in debt
Answer: D
Comment: Cost of goods sold rises from Year 1 to Year 2. Debt falls–it does not rise. Inventory turnover improves from Year 1 (8.4) to Year 2 (11.9). Gross margin falls substantially due to an increase in cost of goods sold. Debt declines (as measured by the equity multiplier). The decline is quite small. Had ROA remained constant at the Year 1 level (-0.92%), the decline in leverage would have caused an increase in ROE from -1.3% to -1.24%.
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

Balance Sheet
Molson Coors Inc.
Years 1 & 2 ($000's)

	Year 1	Year 2
Cash & Marketable Securities	309,705	59,167
Accounts Receivable	108,732	705,426
Inventories	138,577	215,159
Other Current Assets	49,515	74,144
Total Current Assets	606,529	1,053,896
PP&E, Net	869,710	1,380,239
Intangibles	86,289	1,256,145
Other Assets	177,164	607,131
Total Assets	1,739,692	4,297,411
Accounts Payable	222,493	334,647
Other current liabilities	210,052	669,195
Short-term Debt	85,000	144,049
Total Current Liabilities	517,545	1,147,891
Long-term debt	20,000	1,383,392
Other long-term liabilities	250,835	784,277
Total liabilities	788,380	3,315,560
Capital Stock	8,922	28,334
Retained earnings	954,981	1,086,965
Adjustments	-12,591	-133,448
Total shareholders' equity	951,312	981,851
Total Liabilities & Equity	1,739,692	4,297,411

39) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	**Year 2**
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, did ROE rise or fall from Year 1 to Year 2?
A) Rise
B) Fall
Answer: A
Comment: ROE (Year 1) = $\frac{\text{Net Income}}{\text{Equity}} = \frac{\$122{,}964}{\$951{,}312} = 12.9\%$

ROE (Year 2) = $\frac{\$161{,}653}{\$981{,}851} = 16.5\%$

ROE rose from Year 1 to Year 2.
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

40) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	Year 2
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, what is the change in ROA from Year 1 to Year 2? (ΔROA = ROA_2 - ROA_1)

A) -3.3%
B) -2.3%
C) 2.3%
D) 3.5%
E) 3.8%
Answer: A
Comment: $ROA = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$

$\text{ROA Year 1} = \frac{\$122{,}964}{\$1{,}739{,}692} = 7.1\%$

$\text{ROA Year 2} = \frac{\$161{,}653}{\$4{,}297{,}411} = 3.8\%$

Change = 3.8% - 7.1% = -3.3%
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

41) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	Year 2
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, what is the Equity Multiplier from the Du Pont equation (1 + D/E) in Year 2?
A) 2.41
B) 3.95
C) 4.05
D) 4.38
E) 4.58
Answer: D
Comment: $1 + D/E = 1 + \frac{\$3{,}315{,}560}{\$981{,}851} = 4.38$

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

42) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	Year 2
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, what is Net Profit Margin in Year 1?
A) 4.3%
B) 5.1%
C) 8.0%
D) 8.2%
E) 12.9%
Answer: B
Comment: Profit Margin $= \frac{\text{Net Income}}{\text{Sales}} = \frac{\$122{,}964}{\$2{,}429{,}462} = 5.1\%$
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

43) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	Year 2
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, what asset was the main reason for the decline in Total Asset Turnover between Year 1 and Year 2?
A) Property Plant and Equipment
B) Cash and Marketable Securities
C) Inventory
D) Intangibles
E) Accounts Receivable
Answer: D
Comment: Intangibles increased by over $1B, much more than any other asset.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

44) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	Year 2
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, what is the most important determinant of the change in ROE?
A) ROA
B) Profit Margin
C) Total Asset Turnover
D) The change in leverage
Answer: D
Comment: Profit Margin, TAT, and ROA all decreased; Leverage increased. Since ROE increased, the change in leverage is the more important determinant of the change in ROE.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

45) **Income Statement**
Molson Coors Inc.
Years 1 & 2 ($000s)

	Year 1	Year 2
Revenues	2,429,462	3,776,322
COGS	1,537,623	2,414,530
Depreciation	121,091	230,299
SG&A	619,143	833,208
EBIT	151,605	298,285
Interest Expense	-14,403	49,732
Other income	32,005	8,047
Pre-Tax Income	198,013	256,600
Income Tax	75,049	94,947
Net Income	122,964	161,653
Shares outstanding	36,902	36,140
Earnings per share	$3.33	$4.47
Dividends per common share	$0.80	$0.82

Referring to the Molson Coors financial statements, what reason best explains the change in leverage between Year 1 and Year 2?
A) Purchase of another company
B) A large dividend to common shareholders
C) An increase in goodwill
D) Relaxation of the collection policy
E) Large amount of capital expenditures in Year 2
Answer: A
Comment: Long term debt increased significantly, and so did Intangibles - this is likely due to the purchase of another company.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

Balance Sheet
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Cash	29.2	21.2
A/R	108.2	122.6
Inventory	74.0	79.7
Total Current Assets	211.4	223.5
Fixed Assets, Net	81.6	94.1
Goodwill	159.6	184.5
Total Assets	452.6	502.1
Accounts Payable	46.4	50.5
Short-term Debt	23.0	27.0
Total Current Liabilities	69.4	77.5
Long Term Debt	125.8	128.5
Deferred income taxes	14.0	18.6
Equity		
Share Capital	148.9	151.8
Retained Earnings	94.5	125.7
Owners' Equity	243.4	277.5
Total Liabilities & Equity	452.6	502.1

46) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, did ROE rise or fall from Year 1 to Year 2?
A) Fall
B) Rise
Answer: A
Comment: ROE = $\frac{\text{Net Income After Tax}}{\text{Common Equity}}$

ROE Year 1 = $\frac{33.6}{243.4}$ = 13.80%

ROE Year 2 = $\frac{31.2}{277.5}$ = 11.24%

Change = 11.24% - 13.80% = -2.56%
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

47) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, what happened to ROA from Year 1 to Year 2?
A) Increased
B) Decreased
C) Stayed the same
Answer: B
Comment: $\text{ROA} = \dfrac{\text{Net Income After Tax}}{\text{Total Assets}}$

$\text{ROA Year 1} = \dfrac{33.6}{452.6} = 7.42\%$

$\text{ROA Year 2} = \dfrac{31.2}{502.1} = 6.21\%$

Change = 6.21% - 7.42% = -1.21%
Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

48) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, what is the change Equity Multiplier from Year 1 to Year 2?
A) -1.86
B) -0.05
C) 0.95
D) 1.81
E) 1.86
Answer: B
Comment: Equity Multiplier = $\frac{\text{Total Assets}}{\text{Common Equity}}$

	Year 1	Year 2	Change
Multiplier	= 452.6 / 243.4 = 1.86	= 502.1 / 277.5 = 1.81	-0.05

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

49) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, which is the bigger or more important determinant of the change in ROE?
A) ROA
B) The Equity Multiplier
Answer: A
Comment: ROA is the more important force acting on the decrease in ROE. 1 + D/E stayed constant during the two years, but what happened was our income went down and our assets went up (i.e. we are not being as efficient with our assets), therefore ROA is the bigger factor.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

50) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, What is Net Profit Margin in Year 1?
A) 5.0%
B) 6.6%
C) 7.5%
D) 8.8%
E) 9.1%
Answer: D
Comment: Net Profit Margin $= \frac{\text{Profit}}{\text{Sales}} = \frac{33.6}{381.9} = 8.8\%$

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

51) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, is the change between Year 1 and Year 2 in Total Asset Turnover important in explaining the change in ROA?
A) No
B) Yes
Answer: A
Comment: Total Asset Turnover (TAT) didn't change very much. The big change is the decline in the net profit margin, which caused a decline in ROA.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

52) **Income Statement**
CFM Majestic Inc.
Years 1 & 2 ($000,000s)

	Year 1	Year 2
Sales	381.9	416.3
COGS	244.9	278.9
SG&A	59.7	63.8
Depreciation	13.8	15.4
R & D	5.3	4.3
EBIT	58.2	53.9
Interest Expense	7.3	7.9
Earnings before Income Tax	50.9	46.0
Income Taxes	17.3	14.8
Net Income	33.6	31.2

Referring to the CFM Majestic financial statements, pick the most informative explanation for why ROA fell.
A) ROA fell because both gross margin fell and Selling, General & Admin expenses as a percentage of sales fell.
B) ROA fell because Total Asset Turnover fell.
C) ROA fell because the Equity Multiplier fell and because Cost of Goods Sold over Sales rose.
D) ROA fell because Net Income grew more slowly than Total Assets.
E) ROA fell mainly because gross margin fell.

Answer: E
Comment: ROA fell mostly because of the decline in gross margin. The company had a small increase in sales but the COGS went up a lot. Gross margin fell from 35.87% to 33.01%.

SGA/Sales did fall, but that causes ROA to increase. We observed a decrease in ROA.

Total asset turnover declines by only a small amount. It isn't the main cause of the reduction in ROA and ROE.

The ROA is not dependent on the equity multiplier.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

Tootsie Roll Industries, Inc. has been engaged in the manufacture and sale of candy since 1896. Its products are sold under the familiar brand names Tootsie Roll, Tootsie Roll Pops, Charms, Blow Pops, Cella's, Mason Dots and Mason Crows. Tootsie Roll operates four plants in Illinois, New York, Tennessee and Mexico. Tootsie Roll is traded on the New York Stock Exchange and maintains its head office in Chicago, Illinois.

Tootsie Roll's financial statements for Year 5 and Year 6 are provided below.

Tootsie Roll Industries Inc.
Balance Sheet
As of December 31, Year 6 ($000s)

	Year 6
Cash & marketable securities	36,758
Accounts receivable	16,207
Inventories	22,927
Prepaid expenses	2,037
Total Current Assets	77,929
Net Fixed Assets	32,099
Other assets	49,674
Total Assets	159,702
Accounts payable	8,253
Accrued liabilities	14,298
Total Current Liabilities	22,551
Long-term debt	7,306
Shareholders' Equity	
Common stock	6,698
Capital in excess of par	50,820
Retained earnings	72,327
Total Shareholders' Equity	129,845
Total Liabilities & Equity	159,702

53) **Tootsie Roll Industries Inc.**

Income Statement

As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg.
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll, what is the difference between the Industry and Tootsie for the net profit margin? (Tootsie - Industry)

A) 3.1%
B) 3.4%
C) 5.4%
D) 8.2%
E) 11.6%

Answer: B

Comment: Net Profit Margin = $\dfrac{\text{Net Income After Tax}}{\text{Sales}}$

	Industry	Year 6	Difference
NPM	= 8.2%	= 22,556 / 194,299 = 11.61%	+3.4%

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

54) **Tootsie Roll Industries Inc.**

Income Statement

As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll, what is the difference between the Industry and Tootsie for total asset turnover? (Tootsie - Industry)

A) -0.20
B) -0.25
C) -0.34
D) -0.38
E) -0.42
Answer: E

Comment: Total Asset Turnover = $\frac{\text{Sales}}{\text{Total Assets}}$

	Industry	Year 6	Difference
TAT	= 1.64	= 194,299 / 159,702 = 1.22	-0.42

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

55) **Tootsie Roll Industries Inc.**

Income Statement

As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll, what is the difference between the Industry and Tootsie for return on assets (ROA)? (Tootsie - Industry)

A) -0.70%

B) 0.72%

C) 1.72%

D) 7.00%

E) 14.00%

Answer: B

Comment: ROA = $\frac{\text{Net Income After Tax}}{\text{Total Assets}}$

	Industry	Year 6	Difference
ROA	= 13.40%	= 22,556 / 159,702 = 14.12%	0.72%

Diff: 2

Section: 3

AACSB: Analytical Skills

Learning Outcome: F-02: Analyze the major types of financial statements

56) **Tootsie Roll Industries Inc.**
Income Statement
As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll, what is the difference between the Industry and Tootsie for the equity multiplier? (Tootsie - Industry)
A) -0.19
B) -0.17
C) -0.15
D) -0.13
E) -0.11
Answer: A
Comment: Equity Multiplier = $\frac{\text{Total Assets}}{\text{Common Equity}}$

	Industry	Year 6	Difference
Multiplier	= 1.42	= 159,702 / 129,845 = 1.23	-0.19

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

57) **Tootsie Roll Industries Inc.**
Income Statement
As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll, what is the difference between the Industry and Tootsie for the return on equity? (Tootsie - Industry)
A) -2.14%
B) -2.02%
C) -1.81%
D) -1.63%
E) 2.14%
Answer: D

Comment: ROE = $\frac{\text{Net Income After Tax}}{\text{Common Equity}}$

	Industry	Year 6	Difference
ROE	= 19%	= 22,556 / 129,8455 = 17.37%	-1.63%

Diff: 2
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

58) **Tootsie Roll Industries Inc.**
Income Statement
As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll and based on the Du Pont analysis, what main reasons explain the difference(s) between Tootsie's ROE and the industry average ROE?
I. Tootsie does not have enough leverage.
II. Tootsie has more leverage than the industry.
III. Tootsie manages their assets poorly - low total asset turnover.
IV. Tootsie manages their assets poorly - high total asset turnover.
A) I
B) III
C) I and III
D) I or IV
E) II or III
Answer: C

Comment: Tootsie has a lower amount of leverage than the industry.
Tootsie has a much higher net profit margin than the industry (12% v. 8.2%), but this advantage is offset by poor asset management. The total asset turnover for Tootsie is 1.22 but it is 1.64 for the industry. Despite the poor asset management, Tootsie has a higher ROA than the industry. But the ROA would be even higher were it able to take advantage of its higher profitability (net profit margin) through greater asset management. Thus, total asset turnover and leverage both explain Tootsie's poor ROE relative to the industry.
Diff: 1
Section: 3
AACSB: Analytical Skills

Learning Outcome: F-02: Analyze the major types of financial statements

59) **Tootsie Roll Industries Inc.**
Income Statement
As of December 31, Year 6 ($000s)

	Year 6
Net sales	194,299
COGS	103,205
SG&A	54,329
EBIT	36,765
Interest expense	612
Other income (expenses), net	966
Income before income taxes	37,119
Income taxes	14,563
Net Income	22,556
Total Cash dividends	12,316
Shares Outstanding	9,645
Average price per share (4th Q)	$36.50

Selected Financial Ratios

	Year 6	Industry Avg
Net Profit Margin		8.2%
Total Asset Turnover		1.64
ROA		13.4%
Equity Multiplier		1.42
ROE		19%

Referring to the financial statements for Tootsie Roll, what amount of leverage (i.e. debt-to-equity) would Tootsie need to make its Year 6 return on equity equal (ROE) to the industry average ROE? (Round to initial ratios to nearest percentage.)
A) 0.3456
B) 0.9200
C) 1.1333
D) 1.4200
E) 1.7632
Answer: A

Comment: First, compute Tootsie's ROA:

$$\text{ROA} = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$$

$$\text{ROA} = \frac{22{,}556}{159{,}702} = 14.12\%$$

$$\text{ROE} = \text{ROA} \times (1 + \frac{\text{D}}{\text{E}})$$

$$\frac{\text{D}}{\text{E}} = \frac{\text{ROE(Industry)}}{\text{ROA(Tootsie)}} - 1$$

$$\frac{D}{E} = \frac{19}{14.12} - 1 = 0.3456$$

Diff: 3
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements

60) All else held constant, an increase in leverage should increase the ROE.
Answer: TRUE
Comment: If you recall from the section on the Du Pont Analysis,

$$ROE = ROA \times (1 + \frac{Debt}{Equity})$$

If D/E increases and ROA is unchanged, then ROE will rise.
Diff: 1
Section: 3
AACSB: Analytical Skills
Learning Outcome: F-02: Analyze the major types of financial statements