CHAPTER 2
FINANCIAL STATEMENTS, CASH FLOW, AND TAXES

True/False

Easy:

(2.1) Annual report **Answer: a EASY**

1. The annual report contains four basic financial statements: the income statement, balance sheet, statement of cash flows, and statement of stockholders' equity.

a. True
b. False

(2.1) Annual report and expectations **Answer: a EASY**

2. The primary reason the annual report is important in finance is that it is used by investors when they form expectations about the firm's future earnings and dividends, and the riskiness of those cash flows.

a. True
b. False

(2.2) Retained earnings versus cash **Answer: b EASY**

3. Consider the balance sheet of Wilkes Industries as shown below. Because Wilkes has $800,000 of retained earnings, the company would be able to pay cash to buy an asset with a cost of $200,000.

Cash	$ 50,000	Accounts payable	$ 100,000
Inventory	200,000	Accruals	100,000
Accounts receivable	250,000	Total CL	$ 200,000
Total CA	$ 500,000	Debt	200,000
Net fixed assets	$ 900,000	Common stock	200,000
		Retained earnings	800,000
Total assets	$1,400,000	Total L & E	$1,400,000

a. True
b. False

(2.2) Balance sheet **Answer: a EASY**

4. On the balance sheet, total assets must always equal total liabilities and equity.

a. True
b. False

(2.2) Balance sheet: non-cash assets **Answer: a EASY**

5. Assets other than cash are expected to produce cash over time, but the amount of cash they eventually produce could be higher or lower than the values at which these assets are carried on the books.

   a. True
   b. False

(2.3) Income statement **Answer: a EASY**

6. The income statement shows the difference between a firm's income and its costs--i.e., its profits--during a specified period of time. However, not all reported income comes in the form or cash, and reported costs likewise may not correctly reflect cash outlays. Therefore, there may be a substantial difference between a firm's reported profits and its actual cash flow for the same period.

   a. True
   b. False

(2.7) Net operating working capital **Answer: a EASY**

7. Net operating working capital is equal to operating current assets minus operating current liabilities.

   a. True
   b. False

(2.7) Total net operating capital **Answer: b EASY**

8. Total net operating capital is equal to net fixed assets.

   a. True
   b. False

(2.7) Net operating profit after taxes (NOPAT) **Answer: a EASY**

9. Net operating profit after taxes (NOPAT) is the amount of net income a company would generate from its operations if it had no interest income or interest expense.

   a. True
   b. False

(2.10) Interest and Dividend Income Received by a Corporation **Answer: b EASY**

10. The fact that 70% of the dividends received by a corporation is excluded from its taxable income encourages firms to use more debt financing than they would in the absence of this tax law provision.

    a. True
    b. False

(2.10) Interests and Dividends Paid by a Corporation **Answer: b EASY**

11. If the tax laws were changed so that $0.50 out of every $1.00 of interest paid by a corporation was allowed as a tax-deductible expense, this would probably encourage companies to use more debt financing than they presently do, other things held constant.

    a. True
    b. False

(2.10) Interests and Dividends Paid by a Corporation **Answer: b EASY**

12. The interest and dividends paid by a corporation are considered to be deductible operating expenses, hence they decrease the firm's tax liability.

    a. True
    b. False

(Comp: 2.2,2.3) Financial statements **Answer: b EASY**

13. The balance sheet is a financial statement that measures the flow of funds into and out of various accounts over time, while the income statement measures the firm's financial position at a point in time.

    a. True
    b. False

Medium:

(2.4) Retained earnings **Answer: b MEDIUM**

14. Its retained earnings is the actual cash that the firm has generated through operations less the cash that has been paid out to stockholders as dividends. Retained earnings are kept in cash or near cash accounts and, thus, these cash accounts, when added together, will always be equal to the firm's total retained earnings.

    a. True
    b. False

(2.4) Retained earnings **Answer: a MEDIUM**

15. The retained earnings account on the balance sheet does not represent cash. Rather, it represents part of stockholders' claims against the firm's existing assets. This implies that retained earnings are in fact <u>stockholders'</u> reinvested earnings.

    a. True
    b. False

(2.5) Cash flow and net income **Answer: b MEDIUM**

16. In accounting, emphasis is placed on determining net income in accordance with generally accepted accounting principles. In finance, the primary emphasis is also on net income because that is what investors use to value the firm. However, a secondary financial consideration is cash flow, because cash is needed to operate the business.

    a. True
    b. False

(2.6) Statement of cash flows **Answer: a MEDIUM**

17. To estimate the cash flow from operations, depreciation must be added back to net income because it is a non-cash charge that has been deducted from revenue.

    a. True
    b. False

(2.7) Future cash flows **Answer: b MEDIUM**

18. The current cash flow from existing assets is highly relevant to the investor. However, since the value of the firm depends primarily upon its growth opportunities, profit projections from those opportunities are the only relevant future flows with which investors are concerned.

    a. True
    b. False

(2.10) Interests and Dividends Paid by a Corporation **Answer: a MEDIUM**

19. Interest paid by a corporation is a tax deduction for the paying corporation, but dividends paid are not deductible. This treatment, other things held constant, tends to encourage the use of debt financing by corporations.

a. True
b. False

(Comp: 2.1-2.3,2.6)Financial stmts:time dimension Answer: a MEDIUM

20. The time dimension is important in financial statement analysis. The balance sheet shows the firm's financial position at a given point in time, the income statement shows results over a period of time, and the statement of cash flows reflects <u>changes</u> in the firm's accounts over that period of time.

a. True
b. False

Multiple Choice: Conceptual

Easy:

(2.1) Financial statements **Answer: b EASY**

21. Which of the following statements is CORRECT?

    a. The four most important financial statements provided in the annual report are the balance sheet, income statement, cash budget, and the statement of stockholders' equity.
    b. The balance sheet gives us a picture of the firm's financial position at a point in time.
    c. The income statement gives us a picture of the firm's financial position at a point in time.
    d. The statement of cash flows tells us how much cash the firm has in the form of currency and demand deposits.
    e. The statement of cash needs tells us how much cash the firm will require during some future period, generally a month or a year.

(2.2) Balance sheet **Answer: e EASY**

22. Which of the following statements is CORRECT?

    a. The balance sheet for a given year, say 2008, is designed to give us an idea of what happened to the firm during that year.
    b. The balance sheet for a given year, say 2008, tells us how much money the company earned during that year.
    c. The difference between the total assets reported on the balance sheet and the debts reported on this statement tells us the current market value of the stockholders' equity, assuming the statements are prepared in accordance with generally accepted accounting principles (GAAP).
    d. For most companies, the market value of the stock equals the book value of the stock as reported on the balance sheet.
    e. A typical industrial company's balance sheet lists the firm's assets that will be converted to cash first, and then goes on down to list the firm's longest lived assets last.

(2.2) Balance sheet **Answer: c EASY**

23. Other things held constant, which of the following actions would <u>increase</u> the amount of cash on a company's balance sheet?

    a. The company repurchases common stock.
    b. The company pays a dividend.
    c. The company issues new common stock.
    d. The company gives customers more time to pay their bills.
    e. The company purchases a new piece of equipment.

(2.2) Current assets **Answer: c EASY**

24. Which of the following items is **NOT** included in current assets?

    a. Accounts receivable.
    b. Inventory.
    c. Bonds.
    d. Cash.
    e. Short-term, highly liquid, marketable securities.

(2.2) Current liabilities **Answer: d EASY**

25. Which of the following items cannot be found on a firm's balance sheet under current liabilities?

    a. Accounts payable.
    b. Short-term notes payable to the bank.
    c. Accrued wages.
    d. Cost of goods sold.
    e. Accrued payroll taxes.

(2.3) Income statement **Answer: e EASY**

26. Which of the following statements is CORRECT?

    a. The focal point of the income statement is the cash account, because that account cannot be manipulated by "accounting tricks."
    b. The reported income of two otherwise identical firms cannot be manipulated by different accounting procedures provided the firms follow Generally Accepted Accounting Principles (GAAP).
    c. The reported income of two otherwise identical firms must be identical if the firms are publicly owned, provided they follow procedures that are permitted by the Securities and Exchange Commission (SEC).
    d. If a firm follows Generally Accepted Accounting Principles (GAAP), then its reported net income will be identical to its reported net cash flow.
    e. The income statement for a given year, say 2007, is designed to give us an idea of how much the firm earned during that year.

Medium:

(2.2) Balance sheet **Answer: c MEDIUM**

27. Below are the 2008 and 2009 year-end balance sheets for Wolken Enterprises:

Assets:	2009	2008
Cash	$ 200,000	$ 170,000
Accounts receivable	864,000	700,000
Inventories	2,000,000	1,400,000
Total current assets	$ 3,064,000	$2,270,000
Net fixed assets	6,000,000	5,600,000
Total assets	$ 9,064,000	$7,870,000
Liabilities and equity:		
Accounts payable	$ 1,400,000	$1,090,000
Notes payable	1,600,000	1,800,000
Total current liabilities	$ 3,000,000	$2,890,000
Long-term debt	2,400,000	2,400,000
Common stock	3,000,000	2,000,000
Retained earnings	664,000	580,000
Total common equity	$ 3,664,000	$2,580,000
Total liabilities and equity	$ 9,064,000	$7,870,000

Wolken has never paid a dividend on its common stock, and it issued $2,400,000 of 10-year non-callable, long-term debt in 2008. As of the end of 2009, none of the principal on this debt had been repaid. Assume that the company's sales in 2008 and 2009 were the same. Which of the following statements must be CORRECT?

a. Wolken increased its short-term bank debt in 2009.
b. Wolken issued long-term debt in 2009.
c. Wolken issued new common stock in 2009.
d. Wolken repurchased some common stock in 2009.
e. Wolken had negative net income in 2009.

(3.2) Balance sheet **Answer: e MEDIUM**

28. On its 2010 balance sheet, Barngrover Books showed $510 million of retained earnings, and exactly that same amount was shown the following year. Assuming that no earnings restatements were issued, which of the following statements is CORRECT?

a. If the company lost money in 2010, they must have paid dividends.
b. The company must have had zero net income in 2010.
c. The company must have paid out half of its earnings as dividends.
d. The company must have paid no dividends in 2010.
e. Dividends could have been paid in 2010, but they would have had to equal the earnings for the year.

(2.2) Balance sheet **Answer: b MEDIUM**

29. Below is the common equity section (in millions) of Teweles Technology's last two year-end balance sheets:

	2009	2008
Common stock	$2,000	$1,000
Retained earnings	2,000	2,340
Total common equity	$4,000	$3,340

Teweles has never paid a dividend to its common stockholders. Which of the following statements is CORRECT?

a. The company's net income in 2009 was higher than in 2008.
b. Teweles issued common stock in 2009.
c. The market price of Teweles' stock doubled in 2009.
d. Teweles had positive net income in both 2008 and 2009, but the company's net income in 2009 was lower than it was in 2008.
e. The company has more equity than debt on its balance sheet.

(2.3) EPS, DPS, BVPS, and stock price **Answer: c MEDIUM**

30. Which of the following statements is CORRECT?

a. Typically, a firm's DPS should exceed its EPS.
b. Typically, a firm's EBIT should exceed its EBITDA.
c. If a firm is more profitable than average (e.g., Google), we would normally expect to see its stock price exceed its book value per share.
d. If a firm is more profitable than most other firms, we would normally expect to see its book value per share exceed its stock price, especially after several years of high inflation.
e. The more depreciation a firm has in a given year, the higher its EPS, other things held constant.

(2.5) Depreciation,amortization,and net cash flow **Answer: d MEDIUM**

31. Which of the following statements is CORRECT?

a. The more depreciation a firm reports, the higher its tax bill, other things held constant.
b. People sometimes talk about the firm's net cash flow, which is shown as the lowest entry on the income statement, hence it is often called "the bottom line."
c. Depreciation reduces a firm's cash balance, so an increase in depreciation would normally lead to a reduction in the firm's net cash flow.
d. Net cash flow (NCF) is often defined as follows:
   Net Cash Flow = Net Income + Depreciation and Amortization Charges.
e. Depreciation and amortization are not cash charges, so neither of them has an effect on a firm's reported profits.

(2.5) Changes in depreciation **Answer: d MEDIUM**

32. Which of the following would be most likely to occur in the year after Congress, in an effort to increase tax revenue, passed legislation that forced companies to depreciate equipment over <u>longer</u> lives? Assume that sales, other operating costs, and tax rates are not affected, and assume that the same depreciation method is used for tax and stockholder reporting purposes.

    a. Companies' net operating profits after taxes (NOPAT) would decline.
    b. Companies' physical stocks of fixed assets would increase.
    c. Companies' net cash flows would increase.
    d. Companies' cash positions would decline.
    e. Companies' reported net incomes would decline.

(2.6) Net cash flow **Answer: a MEDIUM**

33. Which of the following factors could explain why Dellva Energy had a negative net cash flow last year, even though the cash on its balance sheet increased?

    a. The company sold a new issue of bonds.
    b. The company made a large investment in new plant and equipment.
    c. The company paid a large dividend.
    d. The company had high amortization expenses.
    e. The company repurchased 20% of its common stock.

(2.6) Net cash flow **Answer: b MEDIUM**

34. Analysts who follow Howe Industries recently noted that, relative to the previous year, the company's operating net cash flow <u>increased</u>, yet cash as reported on the balance sheet <u>decreased</u>. Which of the following factors could explain this situation?

    a. The company cut its dividend.
    b. The company made a large investment in a profitable new plant.
    c. The company sold a division and received cash in return.
    d. The company issued new common stock.
    e. The company issued new long-term debt.

(2.6) Net cash flow and net income **Answer: a MEDIUM**

35. A security analyst obtained the following information from Prestopino Products' financial statements:

- Retained earnings at the end of 2009 were $700,000, but retained earnings at the end of 2010 had declined to $320,000.
- The company does not pay dividends.
- The company's depreciation expense is its only non-cash expense; it has no amortization charges.
- The company has no non-cash revenues.
- The company's net cash flow (NCF) for 2010 was $150,000.

On the basis of this information, which of the following statements is CORRECT?

a. Prestopino had negative net income in 2010.

b. Prestopino's depreciation expense in 2010 was less than $150,000.
c. Prestopino had positive net income in 2010, but its income was less than its 2009 income.
d. Prestopino's NCF in 2010 must be higher than its NCF in 2009.
e. Prestopino's cash on the balance sheet at the end of 2010 must be lower than the cash it had on the balance sheet at the end of 2009.

(2.6) Net cash flow and net income **Answer: d MEDIUM**

36. Aubey Aircraft recently announced that its net income increased sharply from the previous year, yet its net cash flow from operations declined. Which of the following could explain this performance?

a. The company's operating income declined.
b. The company's expenditures on fixed assets declined.
c. The company's cost of goods sold increased.
d. The company's depreciation and amortization expenses declined.
e. The company's interest expense increased.

(2.6) Statement of cash flows **Answer: e MEDIUM**

37. Which of the following statements is CORRECT?

a. The statement of cash flows reflects cash flows from operations, but it does not reflect the effects of buying or selling fixed assets.
b. The statement of cash flows shows where the firm’s cash is located; indeed, it provides a listing of all banks and brokerage houses where cash is on deposit.
c. The statement of cash flows reflects cash flows from continuing operations, but it does not reflect the effects of changes in working capital.
d. The statement of cash flows reflects cash flows from operations and from borrowings, but it does not reflect cash obtained by selling new common stock.
e. The statement of cash flows shows how much the firm’s cash--the total of currency, bank deposits, and short-term liquid securities (or cash equivalents)--increased or decreased during a given year.

(2.6) Statement of cash flows **Answer: c MEDIUM**

38. Which of the following statements is CORRECT?

a. In the statement of cash flows, a <u>decrease</u> in accounts receivable is reported as a <u>use</u> of cash.
b. Dividends do not show up in the statement of cash flows because dividends are considered to be a financing activity, not an operating activity.
c. In the statement of cash flows, a <u>decrease</u> in accounts payable is reported as a <u>use</u> of cash.
d. In the statement of cash flows, depreciation charges are reported as a use of cash.
e. In the statement of cash flows, a <u>decrease</u> in inventories is reported as a <u>use</u> of cash.

(2.7) Modifying acct data for managerial purposes Answer: b MEDIUM

39. For managerial purposes, i.e., making decisions regarding the firm's operations, the standard financial statements as prepared by accountants under Generally Accepted Accounting Principles (GAAP) are often modified and used to create alternative data and metrics that provide a somewhat different picture of a firm's operations. Related to these modifications, which of the following statements is CORRECT?

a. The standard statements make adjustments to reflect the effects of inflation on asset values, and these adjustments are normally carried into any adjustment that managers make to the standard statements.
b. The standard statements focus on accounting income for the entire corporation, not cash flows, and the two can be quite different during any given accounting period. However, for valuation purposes we need to discount cash flows, not accounting income. Moreover, since many firms have a number of separate divisions, and since division managers should be compensated on their divisions' performance, not that of the entire firm, information that focuses on the divisions is needed. These factors have led to the development of information that is focused on cash flows and the operations of individual units.
c. The standard statements provide useful information on the firm's individual operating units, but management needs more information on the firm's overall operations than the standard statements provide.
d. The standard statements focus on cash flows, but managers are less concerned with cash flows than with accounting income as defined by GAAP.
e. The best feature of standard statements is that, if they are prepared under GAAP, the data are always consistent from firm to firm. Thus, under GAAP, there is no room for accountants to "adjust" the results to make earnings look better.

(2.7)Depreciation, amortization, and free cash flow Answer: c MEDIUM

40. Which of the following statements is CORRECT?

a. Operating cash flow (OCF) is defined as follows:
   OCF = EBIT(1-T) - Depreciation and Amortization.
b. Changes in working capital have no effect on free cash flow.
c. Free cash flow (FCF) is defined as follows:
   FCF = EBIT(1 - T)
   + Depreciation and Amortization
   - Capital expenditures required to sustain operations
   - Required changes in net operating working capital.
d. Free cash flow (FCF) is defined as follows:
   FCF = EBIT(1-T)+ Depreciation and Amortization + Capital expenditures.
e. Operating cash flow is the same as free cash flow (FCF).

(2.8) MVA and EVA **Answer: d MEDIUM**

41. Which of the following statements is CORRECT?

a. The primary difference between EVA and accounting net income is that when net income is calculated, a deduction is made to account for the cost of common equity, whereas EVA represents net income before deducting the cost of the equity capital the firm uses.
b. MVA gives us an idea about how much value a firm's management has added during the last year.
c. MVA stands for market value added, and it is defined as follows: MVA = (Shares outstanding)(Stock price) + Book value of common equity.
d. EVA stands for economic value added, and it is defined as follows: EVA = EBIT(1-T) – (Investor-supplied op. capital) x (A-T cost of capital).
e. EVA gives us an idea about how much value a firm's management has added over the firm's life.

(2.10) Tax Rules Applicable to US Firms **Answer: b MEDIUM**

42. Which of the following statements is CORRECT?

a. Since companies can deduct dividends paid but not interest paid, our tax system favors the use of equity financing over debt financing, and this causes companies' debt ratios to be lower than they would be if interest and dividends were both deductible.
b. Interest paid to an individual is counted as income for tax purposes and taxed at the individual's regular tax rate, which in 2008 could go up to 35%, but dividends received were taxed at a maximum rate of 15%.
c. The maximum federal tax rate on corporate income in 2008 was 50%.
d. Corporations obtain capital for use in their operations by borrowing and by raising equity capital, either by selling new common stock or by retaining earnings. The cost of debt capital is the interest paid on the debt, and the cost of the equity is the dividends paid on the stock. Both of these costs are deductible from income when calculating income for tax purposes.
e. The maximum federal tax rate on personal income in 2008 was 50%.

(Comp: 2.6,2.7) NCF, FCF, and cash **Answer: c MEDIUM**

43. Last year, Tucker Technologies had (1) a negative net cash flow from operations, (2) a negative free cash flow, and (3) an increase in cash as reported on its balance sheet. Which of the following factors could explain this situation?

a. The company had a sharp increase in its inventories.
b. The company had a sharp increase in its accrued liabilities.
c. The company sold a new issue of common stock.
d. The company made a large capital investment early in the year.
e. The company had a sharp increase in its depreciation and amortization expenses.

(Comp: 2.2,2.3,2.6,2.9) Changes in depreciation **Answer: e MEDIUM**

44. Assume that Congress recently passed a provision that will enable Bev's Beverages Inc. (BBI) to double its depreciation expense for the upcoming year but will have no effect on its sales revenue or tax rate. Prior to the new provision, BBI’s net income after taxes was forecasted to be $4 million. Which of the following best describes the impact of the new provision on BBI’s financial statements versus the statements without the provision? Assume that the company uses the same depreciation method for tax and stockholder reporting purposes.

a. The provision will reduce the company’s net cash flow.
b. The provision will increase the company’s tax payments.
c. Net fixed assets on the balance sheet will increase.
d. The provision will increase the company’s net income.
e. Net fixed assets on the balance sheet will decrease.

(Comp: 2.2,2.3,2.6,2.9) Changes in depreciation **Answer: b MEDIUM**

45. The Nantell Corporation just purchased an expensive piece of equipment. Assume that the firm planned to depreciate the equipment over 5 years on a straight-line basis, but Congress then passed a provision that requires the company to depreciate the equipment on a straight-line basis over 7 years. Other things held constant, which of the following will occur as a result of this Congressional action? Assume that the company uses the same depreciation method for tax and stockholder reporting purposes.

a. Nantell’s taxable income will be lower.
b. Nantell’s net fixed assets as shown on the balance sheet will be higher at the end of the year.
c. Nantell’s cash position will improve (increase).
d. Nantell’s reported net income after taxes for the year will be lower.
e. Nantell’s tax liability for the year will be lower.

(Comp: 2.2,2.3,2.6) Changes in depreciation Answer: d MEDIUM

46. Assume that Pappas Company commenced operations on January 1, 2010, and it was granted permission to use the same depreciation calculations for shareholder reporting and income tax purposes. The company planned to depreciate its fixed assets over 15 years, but in December 2010 management realized that the assets would last for only 10 years. The firm's accountants plan to report the 2010 financial statements based on this new information. How would the new depreciation assumption affect the company’s financial statements?

a. The firm’s reported net fixed assets would increase.
b. The firm’s EBIT would increase.
c. The firm's reported 2010 earnings per share would increase.
d. The firm's cash position in 2010 and 2011 would increase.
e. The firm’s net liabilities would increase.

(Comp: 2.2,2.3,2.9) Changes in depreciation Answer: c MEDIUM

47. A start-up firm is making an initial investment in new plant and equipment. Assume that currently its equipment must be depreciated on a straight-line basis over 10 years, but Congress is considering legislation that would require the firm to depreciate the equipment over 7 years. If the legislation becomes law, which of the following would occur in the year following the change?

a. The firm’s operating income (EBIT) would increase.
b. The firm’s taxable income would increase.
c. The firm’s net cash flow would increase.
d. The firm’s tax payments would increase.
e. The firm’s reported net income would increase.

(Comp: 2.1-2.3,2.6) Financial statements Answer: e MEDIUM

48. Which of the following statements is CORRECT?

a. Dividends paid reduce the net income that is reported on a company’s income statement.
b. If a company uses some of its bank deposits to buy short-term, highly liquid marketable securities, this will cause a decline in

its current assets as shown on the balance sheet.

c. If a company issues new long-term bonds during the current year, this will increase its reported current liabilities at the end of the year.
d. Accounts receivable are reported as a current liability on the balance sheet.
e. If a company pays more in dividends than it generates in net income, its retained earnings as reported on the balance sheet will decline from the previous year's balance.

(Comp: 2.5,2.6,2.8) EVA, CF, and net income Answer: d MEDIUM

49. Which of the following statements is CORRECT?

a. One way to increase EVA is to achieve the same level of operating income but with more investor-supplied capital.
b. If a firm reports positive net income, its EVA must also be positive.
c. One drawback of EVA as a performance measure is that it mistakenly assumes that equity capital is free.
d. One way to increase EVA is to generate the same level of operating income but with less investor-supplied capital.
e. Actions that increase reported net income will always increase net cash flow.

(Comp: 2.2,2.3,2.6) Retained earnings Answer: b MEDIUM

50. Which of the following statements is CORRECT?

a. Since depreciation is a source of funds, the more depreciation a company has, the larger its retained earnings will be, other things held constant.
b. A firm can show a large amount of retained earnings on its balance sheet yet need to borrow cash to make required payments.
c. Common equity includes common stock and retained earnings, less accumulated depreciation.
d. The retained earnings account as shown on the balance sheet shows the amount of cash that is available for paying dividends.
e. If a firm reports a loss on its income statement, then the retained earnings account as shown on the balance sheet will be negative.

Medium/Hard:

(Comp: 2.2,2.3,2.9) Changes in leverage Answer: d MEDIUM/HARD

51. The CFO of Shalit Industries plans to have the company issue $300 million of new common stock and use the proceeds to pay off some of its outstanding bonds. Assume that the company, which does not pay any dividends, takes this action, and that total assets, operating income (EBIT), and its tax rate all remain constant. Which of the following would occur?

    a. The company's taxable income would fall.
    b. The company's interest expense would remain constant.
    c. The company would have less common equity than before.
    d. The company's net income would increase.
    e. The company would have to pay less taxes.

Hard:

(2.6) Net cash flow Answer: d HARD

52. Last year Roussakis Company's operations provided a <u>negative net cash flow</u>, yet the cash shown on its balance sheet <u>increased</u>. Which of the following statements could explain the increase in cash, assuming the company's financial statements were prepared under generally accepted accounting principles?

    a. The company repurchased some of its common stock.
    b. The company dramatically increased its capital expenditures.
    c. The company retired a large amount of its long-term debt.
    d. The company sold some of its fixed assets.
    e. The company had high depreciation expenses.

Multiple Choice: Problems

Easy:

A good bit of relatively simple arithmetic is involved in some of these problems, and although the calculations are simple, it will take students some time to set up the problem and do the arithmetic. We allow for this when assigning problems for a timed test. Also, students must use a number of definitions to answer some of the questions, and to avoid excessive memorization, we provide students with a list of formulas and definitions for use on exams.

(2.2) Balance sheet: market value vs. book value Answer: a EASY

53. Tucker Electronic System's current balance sheet shows total common equity of $3,125,000. The company has 125,000 shares of stock outstanding, and they sell at a price of $52.50 per share. By how much do the firm's market and book values per share differ?

a. $27.50
b. $28.88
c. $30.32
d. $31.83
e. $33.43

(2.2) Balance sheet:change in BVPS from RE addition Answer: b EASY

54. Hunter Manufacturing Inc.'s December 31, 2009 balance sheet showed total common equity of $2,050,000 and 100,000 shares of stock outstanding. During 2010, Hunter had $250,000 of net income, and it paid out $100,000 as dividends. What was the book value per share at 12/31/10, assuming that Hunter neither issued nor retired any common stock during 2010?

a. $20.90
b. $22.00
c. $23.10
d. $24.26
e. $25.47

(2.3) Income statement: EBIT **Answer: e EASY**

55. Companies generate income from their "regular" operations and from other sources like interest earned on the securities they hold, which is called non-operating income. Lindley Textiles recently reported $12,500 of sales, $7,250 of operating costs other than depreciation, and $1,000 of depreciation. The company had no amortization charges and no non-operating income. It had $8,000 of bonds outstanding that carry a 7.5% interest rate, and its federal-plus-state income tax rate was 40%. How much was Lindley's operating income, or EBIT?

a. $3,462
b. $3,644
c. $3,836
d. $4,038
e. $4,250

(2.3) Income statement: taxable income **Answer: b EASY**

56. Frederickson Office Supplies recently reported $12,500 of sales, $7,250 of operating costs other than depreciation, and $1,250 of depreciation. The company had no amortization charges and no non-operating income. It had $8,000 of bonds outstanding that carry a 7.5% interest rate, and its federal-plus-state income tax rate was 40%. How much was the firm's taxable income, or earnings before taxes (EBT)?

a. $3,230.00
b. $3,400.00
c. $3,570.00
d. $3,748.50
e. $3,935.93

(2.5) Net cash flow **Answer: d EASY**

57. JBS Inc. recently reported net income of $4,750 and depreciation of $885. How much was its net cash flow, assuming it had no amortization expense and sold none of its fixed assets.

a. $4,831.31
b. $5,085.59
c. $5,353.25
d. $5,635.00
e. $5,916.75

(2.7) Net operating working capital **Answer: b EASY**

58. Swinnerton Clothing Company's balance sheet showed total current assets of $2,250, all of which were required in operations. Its current liabilities consisted of $575 of accounts payable, $300 of 6% short-term notes payable to the bank, and $145 of accrued wages and taxes. What was its net operating working capital that was financed by investors?

a. $1,454
b. $1,530
c. $1,607
d. $1,687
e. $1,771

(2.8) MVA **Answer: e EASY**

59. Over the years, Janjigian Corporation's stockholders have provided $15,250 of capital, part when they purchased new issues of stock and part when they allowed management to retain some of the firm's earnings. The firm now has 1,000 shares of common stock outstanding, and it sells at a price of $42.00 per share. How much value has Janjigian's management added to stockholder wealth over the years, i.e., what is Janjigian's MVA?

a. $21,788
b. $22,935
c. $24,142
d. $25,413
e. $26,750

Easy/Medium:

(2.3) Income statement:net after-tax income **Answer: d EASY/MEDIUM**

60. Meric Mining Inc. recently reported $15,000 of sales, $7,500 of operating costs other than depreciation, and $1,200 of depreciation. The company had no amortization charges, it had outstanding $6,500 of bonds that carry a 6.25% interest rate, and its federal-plus-state income tax rate was 35%. How much was the firm's net income after taxes? Meric uses the same depreciation expense for tax and stockholder reporting purposes.

a. $3,284.55
b. $3,457.42
c. $3,639.39
d. $3,830.94
e. $4,022.48

(2.4) Statement of stockholders' equity: dividends **Answer: c EASY/MEDIUM**

61. On 12/31/10, Heaton Industries Inc. reported retained earnings of $675,000 on its balance sheet, and it reported that it had $172,500 of net income during the year. On its previous balance sheet, at 12/31/09, the company had reported $555,000 of retained earnings. No shares were repurchased during 2010. How much in dividends did Heaton pay during 2010?

    a. $47,381
    b. $49,875
    c. $52,500
    d. $55,125
    e. $57,881

(2.4) Statement of stockholders' equity: NI **Answer: a EASY/MEDIUM**

62. During the year, Bascom Bakery Inc. paid out $21,750 of common dividends. It ended the year with $187,500 of retained earnings versus the prior year's retained earnings of $132,250. How much net income did the firm earn during the year?

    a. $77,000
    b. $80,850
    c. $84,893
    d. $89,137
    e. $93,594

(2.7) Total operating capital **Answer: d EASY/MEDIUM**

63. NNR Inc.'s balance sheet showed total current assets of $1,875,000 plus $4,225,000 of net fixed assets. All of these assets were required in operations. The firm's current liabilities consisted of $475,000 of accounts payable, $375,000 of 6% short-term notes payable to the bank, and $150,000 of accrued wages and taxes. Its remaining capital consisted of long-term debt and common equity. What was NNR's total investor-provided operating capital?

    a. $4,694,128
    b. $4,941,188
    c. $5,201,250
    d. $5,475,000
    e. $5,748,750

Medium:

(2.3) Income statement: change in net income **Answer: b MEDIUM**

64. Last year Tiemann Technologies reported $10,500 of sales, $6,250 of operating costs other than depreciation, and $1,300 of depreciation. The company had no amortization charges, it had $5,000 of bonds that carry a 6.5% interest rate, and its federal-plus-state income tax rate was 35%. This year's data are expected to remain unchanged except for one item, depreciation, which is expected to <u>increase</u> by $750. By how much will net after-tax income change as a result of the change in depreciation? The company uses the same depreciation calculations for tax and stockholder reporting purposes.

a. -463.13
b. -487.50
c. -511.88
d. -537.47
e. -564.34

(2.7) Free cash flow **Answer: b MEDIUM**

65. TSW Inc. had the following data for last year: Net income = $800; Net operating profit after taxes (NOPAT) = $700; Total assets = $3,000; and Total operating capital = $2,000. Information for the just-completed year is as follows: Net income = $1,000; Net operating profit after taxes (NOPAT) = $925; Total assets = $2,600; and Total operating capital = $2,500. How much free cash flow did the firm generate during the just-completed year?

a. $383
b. $425
c. $468
d. $514
e. $566

(2.7) Net operating working capital **Answer: b MEDIUM**

66. Rao Corporation has the following balance sheet. How much net operating working capital does the firm have?

Cash	$ 10	Accounts payable	$ 20
Short-term investments		Accruals	20
Accounts receivable	50	Notes payable	50
Inventory	40	Current liabilities	$ 90
Current assets	$130	Long-term debt	0
Net fixed assets	100	Common equity	30
		Retained earnings	50
Total assets	$230	Total liab. & equity	$230

a. $54.00
b. $60.00
c. $66.00
d. $72.60
e. $79.86

(2.7) Net operating profit after taxes (NOPAT) C K **Answer: e MEDIUM**

67. Bae Inc. has the following income statement. How much net operating profit after taxes (NOPAT) does the firm have?

Sales	$2,000.00
Costs	1,200.00
Depreciation	100.00
EBIT	$ 700.00
Interest expense	200.00
EBT	$ 500.00
Taxes (35%)	175.00
Net income	$ 325.00

a. $370.60
b. $390.11
c. $410.64
d. $432.25
e. $455.00

(2.7) Net operating profit after taxes (NOPAT) C K Answer: c MEDIUM

68. EP Enterprises has the following income statement. How much net operating profit after taxes (NOPAT) does the firm have?

Sales	$1,800.00
Costs	1,400.00
Depreciation	250.00
EBIT	$ 150.00
Interest expense	70.00
EBT	$ 80.00
Taxes (40%)	32.00
Net income	$ 48.00

a. $81.23
b. $85.50
c. $90.00
d. $94.50
e. $99.23

(2.7) Return on invested capital (ROIC) Answer: d MEDIUM

69. Tibbs Inc. had the following data for the year ending 12/31/07: Net income = $300; Net operating profit after taxes (NOPAT) = $400; Total assets = $2,500; Short-term investments = $200; Stockholders' equity = $1,800; Total debt = $700; and Total operating capital = $2,300. What was its return on invested capital (ROIC)?

a. 14.91%
b. 15.70%
c. 16.52%
d. 17.39%
e. 18.26%

(2.7) Total operating capital **Answer: b MEDIUM**

70. Zumbahlen Inc. has the following balance sheet. How much total operating capital does the firm have?

Cash	$ 20.00	Accounts payable	$ 30.00
Short-term investments	50.00	Accruals	50.00
Accounts receivable	20.00	Notes payable	30.00
Inventory	60.00	Current liabilities	$110.00
Current assets	$150.00	Long-term debt	70.00
Gross fixed assets	$140.00	Common stock	30.00
Accumulated deprec.	40.00	Retained earnings	40.00
Net fixed assets	$100.00	Total common equity	$ 70.00
Total assets	$250.00	Total liab. & equity	$250.00

a. $114.00
b. $120.00
c. $126.00
d. $132.30
e. $138.92

(2.8) Economic Value Added (EVA) **Answer: e MEDIUM**

71. Barnes’ Brothers has the following data for the year ending 12/31/10: Net income = $600; Net operating profit after taxes (NOPAT) = $700; Total assets = $2,500; Short-term investments = $200; Stockholders' equity = $1,800; Total debt = $700; and Total operating capital = $2,100. Barnes' weighted average cost of capital is 10%. What is its economic value added (EVA)?

a. $399.11
b. $420.11
c. $442.23
d. $465.50
e. $490.00

(Comp: 2.3,2.5) Income statement: net cash flow **Answer: e MEDIUM**

72. Edwards Electronics recently reported $11,250 of sales, $5,500 of operating costs other than depreciation, and $1,250 of depreciation. The company had no amortization charges, it had $3,500 of bonds that carry a 6.25% interest rate, and its federal-plus-state income tax rate was 35%. How much was its net cash flow?

a. $3,284.75
b. $3,457.63
c. $3,639.61
d. $3,831.17
e. $4,032.81

(Comp: 2.3,2.7) Income statement:free cash flow Answer: a MEDIUM

73. Wells Water Systems recently reported $8,250 of sales, $4,500 of operating costs other than depreciation, and $950 of depreciation. The company had no amortization charges, it had $3,250 of outstanding bonds that carry a 6.75% interest rate, and its federal-plus-state income tax rate was 35%. In order to sustain its operations and thus generate sales and cash flows in the future, the firm was required to spend $750 to buy new fixed assets and to invest $250 in net operating working capital. How much free cash flow did Wells generate?

a. $1,770.00
b. $1,858.50
c. $1,951.43
d. $2,049.00
e. $2,151.45

Hard:

(2.8) EVA **Answer: c HARD**

74. HHH Inc. reported $12,500 of sales and $7,025 of operating costs (including depreciation). The company had $18,750 of investor-supplied operating assets (or capital), the weighted average cost of that capital (the WACC) was 9.5%, and the federal-plus-state income tax rate was 40%. What was HHH's Economic Value Added (EVA), i.e., how much value did management add to stockholders' wealth during the year?

a. $1,357.13
b. $1,428.56
c. $1,503.75
d. $1,578.94
e. $1,657.88

(Comp: 2.3,2.7) Changes in net income and NCF **Answer: e HARD**

75. Last year, Michelson Manufacturing reported $10,250 of sales, $3,500 of operating costs other than depreciation, and $1,250 of depreciation. The company had no amortization charges, it had $3,500 of bonds outstanding that carry a 6.5% interest rate, and its federal-plus-state income tax rate was 35%. This year's data are expected to remain unchanged except for one item, <u>depreciation</u>, which is expected to increase by $725. By how much will the depreciation change cause the firm's net after-tax income and its net cash flow to change? Note that the company uses the same depreciation calculations for tax and stockholder reporting purposes.

a. -$383.84; $206.68
b. -$404.04; $217.56
c. -$425.30; $229.01
d. -$447.69; $241.06
e. -$471.25; $253.75

76. **(Comp: 2.3,2.7) Income stmt: FCF vs. net income** **Answer: c HARD**

Bartling Energy Systems recently reported $9,250 of sales, $5,750 of operating costs other than depreciation, and $700 of depreciation. The company had no amortization charges, it had $3,200 of outstanding bonds that carry a 5% interest rate, and its federal-plus-state income tax rate was 35%. In order to sustain its operations and thus generate sales and cash flows in the future, the firm was required to make $1,250 of capital expenditures on new fixed assets and to invest $300 in net operating working capital. By how much did the firm's <u>net income exceed its free cash flow</u>?

a. $673.27
b. $708.70
c. $746.00
d. $783.30
e. $822.47

CHAPTER 2
ANSWERS AND SOLUTIONS

1.	(2.1) Annual report	Answer: a EASY
2.	(2.1) Annual report and expectations	Answer: a EASY
3.	(2.2) Retained earnings versus cash	Answer: b EASY
4.	(2.2) Balance sheet	Answer: a EASY
5.	(2.2) Balance sheet: non-cash assets	Answer: a EASY
6.	(2.3) Income statement	Answer: a EASY
7.	(2.7) Net operating working capital	Answer: a EASY
8.	(2.7) Total net operating capital	Answer: b EASY
9.	(2.7) Net operating profit after taxes (NOPAT)	Answer: a EASY
10.	(2.9) Federal income taxes: interest income	Answer: b EASY
11.	(2.9) Federal income taxes: interest expense	Answer: b EASY
12.	(2.9) Federal income taxes: int expense and dividends	Answer: b EASY
13.	(Comp: 2.2,2.3) Financial statements	Answer: b EASY
14.	(2.4) Retained earnings	Answer: b MEDIUM
15.	(2.4) Retained earnings	Answer: a MEDIUM
16.	(2.5) Cash flow and net income	Answer: b MEDIUM
17.	(2.6) Statement of cash flows	Answer: a MEDIUM
18.	(2.7) Future cash flows	Answer: b MEDIUM
19.	(2.9) Federal income taxes: int exp and dividends	Answer: a MEDIUM
20.	(Comp: 2.1-2.3,2.6) Financial stmts: time dimension	Answer: a MEDIUM
21.	(2.1) Financial statements	Answer: b EASY
22.	(2.2) Balance sheet	Answer: e EASY
23.	(2.2) Balance sheet	Answer: c EASY
24.	(2.2) Current assets	Answer: c EASY
25.	(2.2) Current liabilities	Answer: d EASY

26. (2.3) Income statement Answer: e EASY

27. (2.2) Balance sheet Answer: c MEDIUM

28. (2.2) Balance sheet Answer: e MEDIUM

29. (2.2) Balance sheet Answer: b MEDIUM

30. (2.3) EPS, DPS, BVPS, and stock price Answer: c MEDIUM

31. (2.5) Depreciation, amortization,and net cash flow Answer: d MEDIUM

32. (2.5) Changes in depreciation Answer: d MEDIUM

33. (2.6) Net cash flow Answer: a MEDIUM

34. (2.6) Net cash flow Answer: b MEDIUM

35. (2.6) Net cash flow and net income Answer: a MEDIUM

36. (2.6) Net cash flow and net income Answer: d MEDIUM

37. (2.6) Statement of cash flows Answer: e MEDIUM

38. (2.6) Statement of cash flows Answer: c MEDIUM

39. (2.7) Modifying acct data for managerial purposes Answer: b MEDIUM

40. (2.7) Depreciation,amortization,and free cash flow Answer: c MEDIUM

41. (2.8) MVA and EVA Answer: d MEDIUM

42. (2.9) Federal income tax system Answer: b MEDIUM

43. (Comp: 2.6,2.7) NCF, FCF, and cash Answer: c MEDIUM

44. (Comp: 2.2,2.3,2.6,2.9) Changes in depreciation Answer: e MEDIUM

45. (Comp: 2.2,2.3,2.6,2.9) Changes in depreciation Answer: b MEDIUM

46. (Comp: 2.2,2.3,2.6) Changes in depreciation Answer: d MEDIUM

47. (Comp: 2.2,2.3,2.9) Changes in depreciation Answer: c MEDIUM

48. (Comp: 2.1-2.3,2.6) Financial statements Answer: e MEDIUM

49. (Comp: 2.5,2.6,2.8) EVA, CF, and net income Answer: d MEDIUM

50. (Comp: 2.2,2.3,2.6) Retained earnings Answer: b MEDIUM

51. (Comp: 2.2,2.3,2.9) Changes in leverage Answer: d MEDIUM/HARD

52. (2.6) Net cash flow **Answer: d HARD**

53. (2.2) Balance sheet: market value vs. book value **Answer: a EASY**

Shares outstanding	125,000
Price per share	$52.50
Total book common equity	$3,125,000
Book value per share	$25.00
Difference between book and market values	**$27.50**

54. (2.2) Balance sheet: change in BVPS from RE addition **Answer: b EASY**

12/31/09 common equity	$2,050,000
2010 net income	$250,000
2010 dividends	$100,000
2010 addition to retained earnings	$150,000
12/31/10 common equity	$2,200,000
Shares outstanding	100,000
12/31/10 BVPS	**$22.00**

55. (2.3) Income statement: EBIT **Answer: e EASY**

Sales	$12,500
Operating costs excluding depr'n	$7,250
Depreciation	$1,000
Operating income (EBIT)	**$4,250**

56. (2.3) Income statement: taxable income **Answer: b EASY**

Bonds	$8,000.00
Interest rate	7.50%
Sales	$12,500.00
Operating costs excluding depr'n	$7,250.00
Depreciation	$1,250.00
Operating income (EBIT)	$4,000.00
Interest charges	-$600.00
Taxable income	**$3,400.00**

57. (2.5) Net cash flow **Answer: d EASY**

Net income	$4,750.00
Depreciation	$885.00
NCF	**$5,635.00**

58. (2.7) Net operating working capital **Answer: b EASY**

Current assets	$2,250
Accounts payable	$575
Accrued wages and taxes	$145
Net operating working capital	**$1,530**

Note that NOWC represents the current assets required in operations that are financed by investors, given that payables and accruals are generated spontaneously by operations and are thus "free."

59. (2.8) MVA Answer: e EASY

Total book value of equity	$15,250
Stock price per share	$42.00
Shares outstanding	1,000
Market value of equity	42,000
MVA =	**26,750**

60. (2.3) Income statement: net after-tax income Answer: d EASY/MEDIUM

Bonds	$6,500
Interest rate	6.25%
Tax rate	35%
Sales	$15,000
Operating costs excluding depr'n	$7,500
Depreciation	$1,200
Operating income (EBIT)	$6,300.00
Interest charges	-$406.25
Taxable income	$5,893.75
Taxes	-$2,062.81
Net income	**$3,830.94**

61. (2.4) Statement of stockholders' equity: dividends Answer: c EASY/MEDIUM

12/31/10 RE	$675,000
12/31/09 RE	$555,000
Change in RE	$120,000
Net income for 2010	$172,500
Dividends = net income - change	**$52,500**

62. (2.4) Statement of stockholders' equity: NI Answer: a EASY/MEDIUM

Net income = The change in retained earnings plus the dividends paid:

Current RE	$187,500
Previous RE = Current RE - increment	$132,250
Change in RE	$55,250
Plus dividends paid	$21,750
= Net income	**$77,000**

63. (2.7) Total operating capital Answer: d EASY/MEDIUM

Current assets	$1,875,000
Net fixed assets	$4,225,000
Total assets (all are operating assets)	$6,100,000
Spontaneous "free" capital: Acc'ts payable	$475,000
Accruals	$150,000
Total investor-provided operating capital	**$5,475,000**

Note that the total operating capital is the amount of the capital, or assets, that are required in operations and that must be financed by investors, given that payables and accruals are generated spontaneously by operations and do not have to be financed by investors.

64. (2.3) Income statement: change in net income Answer: b MEDIUM

This problem can be worked very easily--just multiply the increase in depreciation by (1 – T) to get the decrease in net income:

Change in depreciation	$750
Tax rate	35%
Reduction in net income	**-$487.50**

We can also get the answer a longer way, which explains things more clearly:

Item	Old	New	Change
Bonds	$ 5,000.00	$ 5,000.00	$ 0.00
Interest rate	6.5%	6.5%	0.0%
Tax rate	35%	35%	0%
Sales	$10,500.00	$10,500.00	$ 0.00
Operating costs excluding depr'n	$ 6,250.00	$ 6,250.00	$ 0.00
Depreciation	$ 1,300.00	$ 2,050.00	$ 750.00
Operating income (EBIT)	$ 2,950.00	$ 2,200.00	-$ 750.00
Interest charges	$ 325.00	$ 325.00	$ 0.00
Taxable income	$ 2,625.00	$ 1,875.00	-$ 750.00
Taxes	$ 918.75	$ 656.25	-$ 262.50
Net income	$ 1,706.25	$ 1,218.75	**-$ 487.50**

65. (2.7) Free cash flow Answer: b MEDIUM

	Prior Year	Current Year
NOPAT = EBIT(1 – T)	$700	$925
Total operating capital	$2,000	$2,500

FCF this year = NOPAT – Net investment in new operating capital
FCF this year = $925 – $500
FCF this year = **$425**

66. (2.7) Net operating working capital Answer: b MEDIUM

Net operating working capital = Operating current assets □ Operating current liabilities
NOWC = $100.00 – □$40.00
NOWC = **$60.00**

67. (2.7) Net operating profit after taxes (NOPAT) Answer: e MEDIUM

EBIT	$700.00
Tax rate	35%
NOPAT =	**$455.00**

68. (2.7) Net operating profit after taxes (NOPAT) Answer: c MEDIUM

EBIT	$150.00
Tax rate	40%
NOPAT =	**$90.00**

69. (2.7) Return on invested capital (ROIC) Answer: d MEDIUM

NOPAT	$400
Total operating capital	$2,300

ROIC = NOPAT/Total operating capital
ROIC = $400/$2,300
ROIC = **17.39%**

70. (2.7) Total operating capital Answer: b MEDIUM

Total op. capital = Operating current assets -– Operating current liabilities + Net fixed assets
Total operating capital = $100.00 – $80.00 + $100.00
Total operating capital = **$120.00**

71. (2.8) Economic Value Added (EVA) Answer: e MEDIUM

NOPAT	$700
Total operating capital	$2,100
WACC	10.00%

EVA = NOPAT – Total operating capital × WACC
EVA = $700.00 – $2,100.00 × 10.00%
EVA = **$490.00**

72. (Comp: 2.3,2.5) Income statement: net cash flow Answer: e MEDIUM

Bonds	$ 3,500.00
Interest rate	6.25%
Tax rate	35.00%
Sales	$11,250.00
Operating costs excluding depr'n	$ 5,500.00
Depreciation	$ 1,250.00
Operating income (EBIT)	$ 4,500.00
Interest charges	$ 218.75
Taxable income	$ 4,281.25
Taxes	$ 1,498.44
Net income	$ 2,782.81
Net cash flow = Net income + deprn	**$ 4,032.81**

73. (Comp: 2.3,2.7) Income statement: free cash flow Answer: a MEDIUM

Bonds	$3,250.00
Interest rate	6.75%
Tax rate	35%
Required addition to net operating working capital	$250.00
Required capital expenditures (fixed assets)	$750.00
Sales	$8,250.00
Operating costs excluding depr'n	$4,500.00
Depreciation	$950.00
Operating income (EBIT)	$2,800.00

FCF = EBIT(1 – T) + Depr'n – Cap Ex – Δ Net Op WC
FCF = $1,820 + $950 – $750 – $250
FCF = **$1,770.00**

74. (2.8) EVA Answer: c HARD

Sales	\$12,500
Operating costs	\$7,025
Operating income (EBIT)	\$5,475
WACC	9.5%
Tax rate	40%
Investor-supplied capital	\$18,750

EVA = EBIT(1 – T) – Investor Capital × WACC
EVA = \$3,285.00 – \$1,781.25
EVA = **\$1,503.75**

75. (Comp: 2.3,2.7) Changes in net income and NCF Answer: e HARD

This problem can be worked very easily--just multiply the increase in depreciation by (1 – T) to get the decrease in net income, and then add to the change in income the change in depreciation to get the change in net cash flow:

Change in depreciation	$725
Tax rate	35.00%
Reduction in net income = Change in Depr'n (1 – Tax rate)	**-$471.25**
Increase in net cash flow = Change in Depr'n – reduction in NI	**$253.75**

We can also get the answer the long way, which explains things in more detail:

	Old	New	Change
Bonds	$3,500	$3,500	$0.00
Interest rate	6.50%	6.50%	$0.00
Tax rate	35%	35%	$0.00
Sales	$10,250	$10,250	$0.00
Operating costs excluding depr'n	$3,500	$3,500	$0.00
Depreciation	$1,250	$1,975	$725.00
Operating income (EBIT)	$5,500	$4,775	-$725.00
Interest charges	$228	$228	$0.00
Taxable income	$5,273	$4,548	-$725.00
Taxes	$1,845	$1,592	-$253.75
Net income after taxes	$3,427	$2,956	**-$471.25**
Net cash flow	$4,677	$4,931	**$253.75**
Check on NCF: Δ NCF = change in depreciation × tax rate			**$253.75**

We like this problem because it illustrates that an increase in depreciation will decrease the firm's net income yet increase its net cash flow, and cash is king.

76. (Comp: 2.3,2.7) Income stmt: FCF vs. net income Answer: c HARD

Bonds	$3,200.00
Interest rate	5.00%
Tax rate	35.00%
Required capital expenditures (fixed assets)	$1,250.00
Required addition to net operating working capital	$300.00
Sales	$9,250.00
Operating costs excluding depr'n	$5,750.00
Depreciation	$700.00
Operating income (EBIT)	$2,800.00
Interest charges	$160.00
Taxable income (EBT)	$2,640.00
Taxes	$924.00
Net income after taxes	$1,716.00

FCF = BIT(1 – T) + Depr'n – Cap Ex – Δ Net Op WC
FCF = $1,820 + $700 – $1,250 – $300
FCF = $970.00

Difference between net income and FCF = **$746.00**