

Chapter 2

Accounting—The Language of Business

Answers to Review Questions

- 2.1** Shareholders' equity is sometimes called the residual because it is what is left over for the shareholders after the company pays off all of its debt. Rearranging the balance sheet equation, we have:

$$\text{Assets} - \text{Liabilities} = \text{Shareholders' equity} = \text{What is left over}$$

Of course, this is just an approximation because the balance sheet reports capital assets at cost, not fair value. In a true liquidation scenario, the assets would be sold for fair value and the proceeds used to pay off the debt. The remainder, the residual, would go to the shareholders.

- 2.2** The balance sheet balances by the addition of net income to and the subtraction of dividends from the opening retained earnings to determine the closing amount in retained earnings, which appears in shareholders' equity. This process is called articulation.
- 2.3** No, the matching principle does not mean that expenses have to equal revenues. If that were the case, net income would always be zero. The matching principle means that expenses incurred to generate revenues must be reported in the same period that the revenues are reported. Expenses incurred are matched to the revenues they generated. For example, a machine that cost \$40,000 with an estimated five-year useful life was acquired in 2008 to manufacture a product. The annual expense is the depreciation expense of $\$40,000 \div 5 = \$8,000$. The matching principle is telling us to apportion \$8,000 to depreciation expense every year for five years because the revenues generated by selling the product produced by using the machine will occur every year for five years.
- 2.4** Taxable income uses net income as a starting point. Adjustments—such as substituting capital cost allowance for depreciation expense—are made to arrive at taxable income. The government wants to be able to use tax policy to influence the economic behaviour of its citizens, including its corporate citizens. For this reason, taxable revenues and tax deductions are sometimes different from their accounting cousins.

- 2.5 “Executives would prefer to show lower earnings per share because the company’s tax bill will be reduced.” This statement is almost always false. Most senior executives receive a bonus or stock option incentives based on the company’s share price performance. Higher EPS usually results in higher share prices. So executives would prefer to show higher EPS to raise the share price.

Taxation is another issue. We have seen that net income, upon which EPS is based, is different than taxable income. Companies will want to report higher net incomes and then hire a good tax accountant to reduce the corporate tax bill.

Solutions to Problems and Cases

2.1. Assets

Cash

Accounts receivable

Accumulated depreciation – cars*

Inventory

Liabilities

Accounts payable

Income taxes payable

Bonds payable

Shareholders’ equity

Common shares

Net income**

Dividends**

* Accumulated depreciation is a contra-asset. It subtract from the Cars account.

** Net income and dividends are part of retained earnings, which is a shareholders’ equity account.

2.2

| | A Company | B Company | C Company | D Company | E Company |
|--------------------|-----------|-----------|-----------|-----------|-----------|
| Sales | 2,000,00 | 450,00 | 700,00 | | 9,458,00 |
| Cost of goods sold | 0 | 0 | 0 | 87,900 | 0 |
| Gross profit | 1,050,00 | 300,00 | 500,00 | | 4,500,00 |
| Expenses | 0 | 0 | 0 | 90,900 | 0 |
| Net income | 950,00 | 150,00 | 200,00 | (3,000) | 4,958,00 |
| | 0 | 0 | 0 |) | 0 |
| | 750,00 | 60,00 | 300,00 | | 3,879,00 |
| | 0 | 0 | 0 | 45,000 | 0 |
| | 200,00 | 90,00 | (100,000 | | 1,079,00 |
| | 0 | 0 |) | (48,000) | 0 |

2.3

(a)

| | A Company | B Company | C Company | D Company | E Company |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| Sales | 850,00 | 775,00 | 500,00 | 350,00 | 7,000,00 |
| Cost of goods sold | 500,00 | 300,00 | 300,00 | 125,00 | 3,500,00 |
| Gross profit | 350,00 | 475,00 | 200,00 | 225,00 | 3,500,00 |
| Expenses: | | | | | |
| Selling expenses | 85,00 | 150,00 | 50,00 | 70,00 | 1,500,00 |
| Administrative expenses | 125,00 | 200,00 | 80,00 | 60,00 | 800,00 |
| Depreciation expense | 45,00 | 50,00 | 40,00 | 60,00 | 400,00 |
| Total expenses | 255,00 | 400,00 | 170,00 | 190,00 | 2,700,00 |
| EBIT | 95,00 | 75,00 | 30,00 | 35,00 | 800,00 |
| Interest expense | 10,00 | 25,00 | 20,00 | 50,00 | 100,00 |
| EBT | 85,00 | 50,00 | 10,00 | (15,00) | 700,00 |
| Income tax expense | 34,00 | 20,00 | 4,00 | (6,00) | 280,00 |
| Net income | 51,00 | 30,00 | 6,00 | (9,00) | 420,00 |

| | | | | |
|----|----|----|----|----|
| 00 | 00 | 00 | 0) | 00 |
|----|----|----|----|----|

- (b) The tax rate is 40% in each case. For example, Company A's tax rate is $\text{Income tax expense} / \text{EBT} = \$34,000 / 85,000 = 40\%$.
- (c) Company D must have been able to carry its taxable loss back to previous years to obtain a tax refund on tax paid in the past. Therefore, Company D has a negative tax rate this year.

2.4

(a)

| | <u>2010</u> | <u>2009</u> | <u>2008</u> | 2007 |
|--|-------------|-------------|-------------|---------|
| <u>Statement of Retained Earnings</u> | | | | |
| Retained earnings, 1/1 | 400,000 | 355,000 | 300,000 | |
| Net income (loss) | (75,000) | 101,000 | 100,000 | |
| Dividends paid | 35,000 | 56,000 | 45,000 | |
| Retained earnings, 12/31 | 290,000 | 400,000 | 355,000 | 300,000 |

(b)

| | <u>2010</u> | <u>2009</u> | <u>2008</u> |
|---------------------------------------|-------------|-------------|-------------|
| <u>Condensed Balance Sheet</u> | | | |
| Current assets | 150,000 | | 125,000 |
| Property, plant and equipment | 700,000 | 300,000 | 625,000 |
| Other assets | 40,000 | 800,000 | 144,000 |
| Total assets | 890,000 | 50,000 | 894,000 |
| Current liabilities | 100,000 | | 89,000 |
| Long-term debt | 300,000 | 150,000 | 250,000 |
| Total liabilities | 400,000 | 400,000 | 339,000 |
| Common shares | 200,000 | 550,000 | 200,000 |

| | | |
|--|--------|-----------|
| | 0 | 0 |
| | 290,00 | 355,00 |
| Retained earnings | 0 | 400,000 |
| | 490,00 | 555,00 |
| Total shareholders' equity | 0 | 600,000 |
| | 890,00 | 894,00 |
| Total liabilities and shareholders' equity | 0 | 1,150,000 |

2.5

**Jamery Goods Company:
Statement of retained earnings
for the year ended December 31, 2010**

| | |
|---------------------------|------------------|
| Opening retained earnings | \$ 40,000 |
| Add: net income | 50,000 |
| Deduct: dividends | (10,000) |
| Closing retained earnings | <u>\$ 80,000</u> |

2.6

**Jamery Goods Company:
Balance sheet
as at December 31, 2010**

Assets

| | |
|---------------------------------|------------------------|
| Cash | \$ 200,000 |
| Accounts receivable | 60,000 |
| Inventory | 30,000 |
| Cars | \$75,000 |
| Accumulated depreciation – cars | <u>(30,000)</u> 45,000 |
| Total assets | <u>\$ 335,000</u> |

Liabilities

Current liabilities

| | | |
|---|---------------|--------------------------|
| Accounts payable | \$20,000 | |
| Income taxes payable | <u>15,000</u> | |
| Total current liabilities | | \$ 35,000 |
| Long-term liabilities | | |
| Bonds payable, due 2016 | | <u>100,000</u> |
| Total liabilities | | 135,000 |
| Shareholders' equity | | |
| Common shares | 120,000 | |
| Retained earnings | <u>80,000</u> | |
| Total shareholders' equity | | <u>200,000</u> |
| Total liabilities plus shareholders' equity | | <u><u>\$ 335,000</u></u> |

2.7

(a)

**Flex Motors
Income Statement
for the month ended March 31, 2010**

| | | |
|-------------------------|---------------|-----------------------|
| Motor revenues | | 325,000 |
| Cost of goods sold | | <u>135,000</u> |
| Gross profit | | 190,000 |
| Less: Selling expenses | 45,000 | |
| Depreciation expense | 14,000 | |
| Administrative expenses | <u>25,000</u> | <u>84,000</u> |
| Net income | | <u><u>106,000</u></u> |

(b)

**Flex Motors
Statement of Retained Earnings
for the month ended March 31, 2010**

| | |
|---|-----------|
| Opening retained earnings (March 1, 2010) | 55,7 |
| add: Net income | <u>20</u> |
| | 106,0 |

Less: Dividends declared

| | |
|--|-------|
| | 00 |
| | (3,5 |
| | 00) |
| | 158,2 |
| | 20 |

(c)

**Flex Motors
Balance Sheet
as at March 31, 2010**

Assets

Current assets

| | | |
|----------------------|--------|--------|
| Cash | 16,450 | |
| Accounts receivable | 17,000 | |
| Total current assets | | 33,450 |

| | | |
|--|----------|---------|
| Buildings | 450,000 | |
| Less: Accumulated depreciation – buildings | (56,000) | 394,000 |
| Total assets | | 427,450 |

Current Liabilities

| | | |
|-----------------------|-------|--------|
| Accounts payable | 8,230 | |
| Unearned royalty fees | 5,000 | |
| Interest payable | 6,000 | 19,230 |

Shareholders Equity

| | | |
|-------------------|---------|---------|
| Common shares | 250,000 | |
| Retained earnings | 158,220 | 408,220 |
| | | 427,450 |

2.8

**Hockey Consultants
Income Statement
for the year ended December 31, 2010**

Revenues

| | |
|------------------------|---------|
| Consulting fees earned | 550,000 |
|------------------------|---------|

Expenses

| | |
|---------------|--------|
| Hydro expense | 35,000 |
|---------------|--------|

| | | |
|-------------------------|--------------|----------------|
| Insurance expense | 18,000 | |
| Office salaries expense | 45,000 | |
| Sales salaries expense | 65,000 | |
| Supplies expense | <u>8,000</u> | |
| Total expenses | | <u>171,000</u> |
| Net income | | <u>379,000</u> |

Hockey Consultants
Statement of Shareholders' Equity
for the year ended December 31, 2010

| | |
|--|-----------------|
| Beginning retained earnings, January 1 | 123,000 |
| Add: net income | 379,000 |
| Less: dividends | <u>(75,000)</u> |
| earnings, December 31 | <u>427,000</u> |

Hockey Consultants
Balance Sheet
as at December 31, 2010

| Assets | | Liabilities | |
|---------------------|----------------|-----------------------------|----------------|
| Cash | 30,000 | Accounts payable | 12,000 |
| Accounts receivable | 50,000 | Unearned consulting fees | <u>150,000</u> |
| Prepaid insurance | 9,000 | Total liabilities | 162,000 |
| Building, net | 500,000 | | |
| Land | <u>200,000</u> | Shareholders' Equity | |
| | | Common shares | 200,000 |
| | | Retained earnings | <u>427,000</u> |

| | | | |
|--------------|----------------|--|----------------|
| | | Total shareholders' equity | <u>627,000</u> |
| Total assets | <u>789,000</u> | Total liabilities and shareholders' equity | <u>789,000</u> |

2.9

MicroHard Company
Balance Sheet
December 31, 2010

Assets**Current assets**

| | |
|------------------------------------|----------|
| Cash | \$30,000 |
| Accounts receivable | 50,000 |
| Notes receivable (current portion) | 5,000 |

| | |
|----------------------|--------|
| Total current assets | 85,000 |
|----------------------|--------|

Long-term investments

| | |
|------------------------------------|--------|
| Notes receivable (40,000 - 5,000) | 35,000 |
| Land not used in operations | 50,000 |
| Total long-term investments | 85,000 |

Property, plant & equipment (P.P.E.)

| | |
|-------------------------------------|-----------|
| Land used in operations | 150,000 |
| Building | 500,000 |
| Accumulated depreciation – building | (125,000) |
| Building, net | 375,000 |
| Total P.P.E. | 525,000 |

Intangible assets

| | |
|---------|---------|
| Patents | 207,000 |
|---------|---------|

| | |
|---------------------|---------|
| Total assets | 902,000 |
|---------------------|---------|

Current liabilities

| | |
|---------------------------------|-----------|
| Accounts payable | \$ 12,000 |
| Notes payable (current portion) | 20,000 |

| | |
|----------------------------------|--------|
| Total current liabilities | 32,000 |
|----------------------------------|--------|

Long-term liabilities

| | |
|----------------------------------|---------|
| Bonds payable | 327,000 |
| Notes payable (300,000 - 20,000) | 280,000 |

| | |
|------------------------------------|---------|
| Total long-term liabilities | 607,000 |
|------------------------------------|---------|

| | |
|--------------------------|---------|
| Total liabilities | 639,000 |
|--------------------------|---------|

Shareholders' equity

| | |
|-----------------------------------|---------|
| Common shares | 100,000 |
| Retained earnings | 163,000 |
| Total shareholders' equity | 263,000 |

| | |
|---|---------|
| Total liabilities and shareholders' equity | 902,000 |
|---|---------|

2.10

Laurier Baseball Inc.
Income Statement
for the year ended December 31, 2010

| | | |
|--|------------------|-------------------------|
| | | \$ |
| Sales ($\$7.00 \times 2,000,000$) | | 14,000,000 |
| Cost of goods sold ($\$5.50 \times 2,000,000$) | | <u>11,000,000</u> |
| Gross profit | | 3,000,000 |
| Selling expenses: | | |
| Commissions ($10\% \times 14,000,000$) | \$1,400,000 | |
| Administrative Expenses: | | |
| Salaries | \$250,000 | |
| Rent | 500,000 | |
| Depreciation | <u>270,000</u> | |
| | <u>1,020,000</u> | |
| Total expenses | | <u>2,420,000</u> |
| Net income | | <u><u>\$580,000</u></u> |

2.11

Healthy Movers Ltd. is the better and safer investment even though it lost money in 2010.

Joe expects the economy to improve, so Healthy will likely earn a profit in 2011.

On the other hand, Al's Co-Haul Co. has too much debt, all of which is due next year. It

is very unlikely that Al's can repay the debt without a major injection of cash into the business. With the existing high debt, it is unlikely the firm can obtain more bank loans.

The only recourse seems to be an equity offering, that is, to sell more shares into the market to pay down the debt. Selling more shares will increase the supply and likely drive the share price lower, making Al's an unwise investment for Joe.

2.12

(a) The account balance differences between 2009 and 2010 are:

| Medicine Hat ArtGlass Ltd. Balance Sheet as at December 31 | | | | |
|---|-------------------|-------------------|------------|----------|
| | 2010 | 2009 | Difference | |
| Cash | \$ 62,000 | \$ 75,000 | \$ | (13,000) |
| Accounts receivable | 15,000 | 18,500 | | (3,500) |
| Inventory | 47,000 | 42,000 | | 5,000 |
| Land | 50,000 | 50,000 | | - |
| Buildings | 145,000 | 145,000 | | - |
| Accumulated depreciation - buildings | (110,000) | (105,000) | | (5,000) |
| Furniture and equipment (F. & E.) | 30,000 | 24,000 | | 6,000 |
| Accumulated depreciation - F. & E. | (12,000) | (11,000) | | (1,000) |
| Trucks | 36,000 | 50,000 | | (14,000) |
| Accumulated depreciation - Trucks | (22,000) | (26,000) | | 4,000 |
| Total assets | \$ 241,000 | \$ 262,500 | | |
| Accounts payable | \$ 49,000 | \$ 35,000 | | 14,000 |
| Taxes payable | \$ 4,500 | \$ 6,200 | | (1,700) |
| Bonds payable, 2018 | 75,000 | 50,000 | | 25,000 |
| Common shares | 95,000 | 95,000 | | - |
| Retained earnings | 17,500 | 76,300 | | |
| Total liabilities and shareholders' equity | \$ 241,000 | \$ 262,500 | | |

(b) The cash flow from operating activities for 2010 is:

| Medicine Hat ArtGlass Ltd. Cash Flow Statement for the year ended December 31, 2010 | |
|--|-----------------|
| Cash flows from operating activities | |
| Net loss | (38,800) |
| Add back: Depreciation | 11,000 |
| Add back: Loss on sale of truck | 3,000 |
| | <u>(24,800)</u> |
| Add: decrease in accounts receivable | 3,500 |
| Less: increase in inventory | (5,000) |
| Add: increase in accounts payable | 14,000 |

| | | |
|--|----------------|----------|
| Less: decrease in taxes payable | <u>(1,700)</u> | |
| Decrease in cash from operating activities | | (14,000) |

2.13

(a) The loss on the sale of the truck is calculated as follows:

| | | |
|--------------------------|----------------|--------------------------|
| Sold truck for: | | \$ 2,000 |
| Cost of truck | \$ 14,000 | |
| Accumulated depreciation | <u>(9,000)</u> | |
| Net book value | | <u>5,000</u> |
| Loss on sale of truck | | <u><u>\$ (3,000)</u></u> |

(b)

Cash flows from investing activities

| | | |
|--|----------------|------------|
| Proceeds from sale of truck | \$ 2,000 | |
| Purchase of new F. & E. | <u>(6,000)</u> | |
| Decrease in cash from investing activities | | \$ (4,000) |

2.14

Cash flows from financing activities

| | | |
|--|-----------------|-----------------|
| Issue of new bonds | \$ 25,000 | |
| Dividends paid | <u>(20,000)</u> | |
| Increase in cash from financing activities | | <u>\$ 5,000</u> |

2.15

(a)

Medicine Hat ArtGlass Ltd. Summary Cash Flow Statement for the year ended December 31, 2010

| | |
|--|----------------------|
| Decrease in cash from operating activities | (14,000) |
| Decrease in cash from investing activities | (4,000) |
| Increase in cash from financing activities | <u>5,000</u> |
| Total increase in cash | <u>(13,000)</u> |
| Cash at January 1, 2010 | <u>75,000</u> |
| Cash at December 31, 2010 | <u><u>62,000</u></u> |

(b) Yes, the summary cash flow statement works because the cash at December 31, 2010 agrees to the balance sheet cash amount. The change in cash from \$75,000 in 2009 to \$62,000 in 2010 was (\$13,000).

(c) MHA lost cash on operating and investing activities and financed this and the dividend payment by issuing \$25,000 worth of new bonds.

2.16

First, calculate the difference in account balances between 2010 and 2009.

| | 2010 | 2009 | Difference |
|---|-------------------|-------------------|------------|
| Current assets | | | |
| Cash | \$ 25,560 | \$ 28,000 | \$ (2,440) |
| Accounts receivable | 15,000 | 10,000 | 5,000 |
| Inventory | 45,980 | 60,000 | (14,020) |
| Total current assets | 86,540 | 98,000 | |
| Property, plant and equipment | | | |
| Land | 100,000 | 10,000 | 90,000 |
| Buildings, net | 250,000 | 260,000 | (10,000) |
| Furniture, net | 75,800 | 80,000 | (4,200) |
| Equipment, net | 54,600 | 42,000 | 12,600 |
| Total, property, plant and equipment | 480,400 | 392,000 | |
| Intangible assets | | | |
| Patents | 42,000 | - | 42,000 |
| Total assets | <u>\$ 608,940</u> | <u>\$ 490,000</u> | |
| Current liabilities | | | |
| Accounts payable | \$ 22,600 | \$ 30,000 | (7,400) |
| Long term liabilities | | | |
| Bonds payable | 120,000 | 120,000 | - |
| Total liabilities | 142,600 | 150,000 | |
| Shareholders' equity | | | |
| Common shares | 400,000 | 300,000 | 100,000 |
| Retained earnings | 66,340 | 40,000 | |
| Total shareholders' equity | 466,340 | 340,000 | |
| Total liabilities and shareholders' equity | <u>\$ 608,940</u> | <u>\$ 490,000</u> | |

Second, prepare the cash flow statement using the account balance differences and the information given in the question.

The Moosonee Beer Company Cash Flow Statement

for the year ended December 31, 2010

Cash flows from operating activities

| | | |
|---|----------------|-----------|
| Net income | \$ 46,340 | |
| Add back: Depreciation (\$10,000 + 4,200 + 2,000) | 16,200 | |
| | <u>62,540</u> | |
| Less: Increase in accounts receivable | (5,000) | |
| Add: decrease in inventory | 14,020 | |
| Less: decrease in accounts payable | <u>(7,400)</u> | |
| Increase in cash from operating activities | | \$ 64,160 |

Cash flows from investing activities

| | | |
|--|-----------------|-----------|
| New land purchased | \$ (90,000) | |
| New equipment purchases (\$12,600 + 2,000) | (14,600) | |
| New patents purchased | <u>(42,000)</u> | |
| Decrease in cash from investing activities | | (146,600) |

Cash flows from financing activities

| | | |
|--|-----------------|-------------------------|
| New common shares issued | \$ 100,000 | |
| Dividends paid | <u>(20,000)</u> | |
| Increase in cash from financing activities | | 80,000 |
| Total decrease in cash | | (2,440) |
| Cash at January 1, 2010 | | 28,000 |
| Cash at December 31, 2010 | | <u><u>\$ 25,560</u></u> |

2.17

(a) Trucks:

| | | |
|--------------------------|-----------------|------------------------|
| Sold truck for: | | \$ 12,000 |
| Cost of truck | \$ 54,000 | |
| Accumulated depreciation | <u>(45,000)</u> | |
| Net book value | | <u>9,000</u> |
| Gain on sale of truck | | <u><u>\$ 3,000</u></u> |

Furniture:

| | | |
|--------------------------------|----------------|-------------------|
| Sold furniture for: | | \$ 6,000 |
| Cost of furniture | \$ 10,000 | |
| Accumulated depreciation | <u>(4,000)</u> | |
| Net book value | | <u>6,000</u> |
| Gain/loss on sale of furniture | | <u><u>nil</u></u> |

(b)

| | | |
|--------------------------|------------|-------------------|
| Purchase of trucks: | | |
| Trucks, 12/31/2010 | | \$ 325,000 |
| Trucks, 12/31/2009 | \$ 254,000 | |
| Less: Cost of truck sold | 54,000 | 200,000 |
| Cost of trucks purchased | | <u>\$ 125,000</u> |

(c) First, calculate the difference for the balance sheet accounts:

| Sudbury Wolverine Comics Ltd. Balance Sheet as at December 31 | | | |
|---|---------------------|-------------------|------------|
| | 2010 | 2009 | Difference |
| Cash | \$ 135,000 | \$ 63,500 | \$ 71,500 |
| Accounts receivable | 210,000 | 120,000 | 90,000 |
| Inventory | 145,000 | 110,000 | 35,000 |
| Land | 120,000 | 120,000 | - |
| Buildings | 400,000 | 350,000 | 50,000 |
| Accumulated depreciation - buildings | (125,000) | (110,000) | (15,000) |
| Furniture and equipment | 110,000 | 120,000 | (10,000) |
| Accumulated depreciation - F. & E. | (55,000) | (49,000) | (6,000) |
| Trucks | 325,000 | 254,000 | 71,000 |
| Accumulated depreciation - trucks | (100,000) | (105,000) | 5,000 |
| Total assets | <u>\$ 1,165,000</u> | <u>\$ 873,500</u> | |
| Accounts payable | \$ 100,000 | \$ 87,000 | 13,000 |
| Bonds payable, 2025 | 300,000 | 430,000 | (130,000) |
| Common shares | 250,000 | 250,000 | - |
| Retained earnings | 515,000 | 106,500 | |
| Total liabilities and shareholders' equity | <u>\$ 1,165,000</u> | <u>\$ 873,500</u> | |

Second, prepare the cash flow statement using the balance sheet account differences and the answers to part (a) and (b).

| Sudbury Wolverine Comics Ltd. Cash Flow Statement for the year ended December 31, 2010 | |
|--|----------------|
| Cash flows from operating activities | |
| Net income | \$ 421,000 |
| Add back: Depreciation | 65,000 |
| Less: Gain on sale of truck | <u>(3,000)</u> |
| | 483,000 |

| | | |
|---|-----------|-------------------|
| Less: increase in accounts receivable | (90,000) | |
| Less: increase in inventory | (35,000) | |
| Add: increase in accounts payable | 13,000 | |
| Increase in cash from operating activities | | \$ 371,000 |
| Cash flows from investing activities | | |
| Proceeds from sale of furniture | 6,000 | |
| Proceeds from sale of truck | 12,000 | |
| Purchase of new truck | (125,000) | |
| Purchase of new building | (50,000) | |
| Decrease in cash from investing activities | | (157,000) |
| Cash flows from financing activities | | |
| Repayment of bonds | (130,000) | |
| Dividends paid | (12,500) | |
| Decrease in cash from financing activities | | (142,500) |
| Total increase in cash | | 71,500 |
| Cash at January 1, 2010 | | 63,500 |
| Cash at December 31, 2010 | | <u>\$ 135,000</u> |

2.18

(a) The asset purchases are calculated as follows:

| | Buildings | Furniture | Equipment | Copyrights |
|---|------------------|------------------|------------------|-------------------|
| 2010 balance | \$400,000 | \$ 65,000 | \$125,000 | \$ 96,000 |
| 2009 balance | 250,000 | 56,000 | 86,000 | 76,000 |
| Less: 2010 depreciation and amortization | (10,000) | (7,500) | (14,000) | (4,000) |
| 2009 adjusted balance | 240,000 | 48,500 | 72,000 | 72,000 |
| Purchases (2010 balance -2009 adjusted balance) | <u>\$160,000</u> | <u>\$ 16,500</u> | <u>\$ 53,000</u> | <u>\$ 24,000</u> |

(b) The balance sheet account balance differences are:

| Trail Mixer Corp. | | | |
|--------------------------------------|----------------|----------------|------------|
| Balance Sheet | | | |
| | 2010 | 2009 | Difference |
| Current assets | | | |
| Cash | 36,500 | 54,000 | (17,500) |
| Accounts receivable | 34,000 | 40,000 | (6,000) |
| Inventory | 50,000 | 40,000 | 10,000 |
| Total current assets | <u>120,500</u> | <u>134,000</u> | |
| Property, plant and equipment | | | |
| Land | 65,000 | 55,000 | 10,000 |
| Buildings, net | 400,000 | 250,000 | 150,000 |

| | | | |
|---|---------|---------|----------|
| Furniture, net | 65,000 | 56,000 | 9,000 |
| Equipment, net | 125,000 | 86,000 | 39,000 |
| Total, property, plant and equipment | 655,000 | 447,000 | |
| Intangible assets | | | |
| Copyrights | 96,000 | 76,000 | 20,000 |
| Total assets | 871,500 | 657,000 | |
| Current liabilities | | | |
| Accounts payable | 40,000 | 60,000 | (20,000) |
| Long term liabilities | | | |
| Bonds payable | 300,000 | 185,000 | 115,000 |
| Total liabilities | 340,000 | 245,000 | |
| Shareholders' equity | | | |
| Common shares | 200,000 | 200,000 | |
| Retained earnings | 331,500 | 212,000 | |
| Total shareholders' equity | 531,500 | 412,000 | |
| Total liabilities and shareholders' equity | 871,500 | 657,000 | |

The cash flow statement is:

| Trail Mixer Corp. | | |
|--|-------------|------------|
| Cash Flow Statement | | |
| for the year ended December 31, 2010 | | |
| Cash flows from operating activities | | |
| Net income | \$ 200,000 | |
| Add back: Depreciation (\$10,000 + 7,500 + 14,000) | 31,500 | |
| Amortization | 4,000 | |
| | 235,500 | |
| Add: decrease in accounts receivable | 6,000 | |
| Less: increase in inventory | (10,000) | |
| Less: decrease in accounts payable | (20,000) | |
| Increase in cash from operating activities | | \$ 211,500 |
| Cash flows from investing activities | | |
| New land purchased | \$ (10,000) | |
| New building purchased (\$150,000 + 10,000) | (160,000) | |
| New furniture purchased (\$9,000 + 7,500) | (16,500) | |
| New equipment purchased (\$39,000 + 14,000) | (53,000) | |
| New copyrights purchased (\$20,000 + 4,000) | (24,000) | |
| Decrease in cash from investing activities | | (263,500) |
| Cash flows from financing activities | | |
| New bonds issued | 115,000 | |
| Dividends paid | (80,500) | |

| | |
|--|------------------|
| Increase in cash from financing activities | 34,500 |
| Total decrease in cash | (17,500) |
| Cash at January 1, 2010 | 54,000 |
| Cash at December 31, 2010 | <u>\$ 36,500</u> |

2.19

| Years | Beg. Net book value | Depreciation | End. Net book value | Beg. UCC | CCA @ 20% | End. UCC |
|-------|---------------------------|--------------|---------------------------|-------------|--------------|-------------|
| 1 | 1,500,000 | 150,000 | 1,350,000 | 1,500,000 | 150,000 | 1,350,000 |
| 2 | 1,350,000 | 150,000 | 1,200,000 | 1,350,000 | 270,000 | 1,080,000 |
| 3 | 1,200,000 | 150,000 | 1,050,000 | 1,080,000 | 216,000 | 864,000 |
| 4 | 1,050,000 | 150,000 | 900,000 | 864,000 | 172,800 | 691,200 |
| 5 | 900,000 | 150,000 | 750,000 | 691,200 | 138,240 | 552,960 |
| 6 | 750,000 | 150,000 | 600,000 | 552,960 | 110,592 | 442,368 |
| 7 | 600,000 | 150,000 | 450,000 | 442,368 | 88,474 | 353,894 |
| 8 | 450,000 | 150,000 | 300,000 | 353,894 | 70,779 | 283,115 |
| 9 | 300,000 | 150,000 | 150,000 | 283,115 | 56,623 | 226,492 |
| 10 | 150,000 | 150,000 | - | 226,492 | 45,298 | 181,194 |

2.20

(a)

| | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------------|------------------|------------------|------------------|------------------|------------------|
| Taxable income | \$ 52,000 | \$ 75,000 | \$ 98,000 | \$121,000 | \$144,000 |
| Tax rate | 30% | 34% | 45% | 48% | 28% |
| Tax payable | <u>\$ 15,600</u> | <u>\$ 25,500</u> | <u>\$ 44,100</u> | <u>\$ 58,080</u> | <u>\$ 40,320</u> |

(b) Some causes of the difference in net income and taxable income might be:

- 1) CCA is higher than depreciation expense, thus lowering taxable income.
- 2) Some of the accounting income might not be taxable. Dividends from Canadian companies are not taxable.
- 3) Some expenses like warranty expenses and pension expenses might have already been reported in the accounting financial statements but are just now being allowed as deductible in the tax returns.

2.21

(a)

$$\text{Depreciation expense for 2010} = (500,000 - 10,000) / 10 = 49,000$$

(b)

$$\text{CCA for 2010} = 30\% \times 500,000 \times 1/2 = 75,000$$

(c)

$$\begin{aligned} \text{Tax saving for 2010} &= \text{CCA} \times \text{tax rate} \\ &= 75,000 \times 35\% = 26,250 \end{aligned}$$

2.22

(a)

$$\text{Depreciation expense for 2011} = (500,000 - 10,000) / 10 = 49,000$$

(b)

$$\text{CCA for 2011} = 30\% \times (500,000 - 75,000) = 127,500$$

(c)

$$\begin{aligned} \text{Tax saving for 2011} &= \text{CCA} \times \text{tax rate} \\ &= 127,500 \times 35\% = 44,625 \end{aligned}$$

2.23

(a)

| | |
|--------------------------------|--------------|
| Earnings before income taxes | \$ 5,025,000 |
| Add back: depreciation expense | 1,250,000 |

Less:

| | UCC | CCA rate | CCA amount | |
|--------------------|-----------|-------------|---------------|-------------|
| Buildings | 3,000,000 | 4% | 120,000 | |
| Machines | 5,600,000 | 20% | 1,120,000 | |
| Vehicles | 800,000 | 30% | 240,000 | |
| Total CCA for 2010 | | | | (1,480,000) |

| | |
|----------------|---------------------|
| Taxable income | <u>\$ 4,795,000</u> |
|----------------|---------------------|

(b)

| | |
|----------------|---------------------|
| Taxable income | \$ 4,795,000 |
| Tax rate | <u>35%</u> |
| Taxes payable | <u>\$ 1,678,250</u> |

2.24

- (a) You can look up the cash balance at the end of the year on last year's balance sheet. This amount is the opening cash balance in this year's cash flow statement. Then complete the cash flow statement using the president's forecasted cash flows to determine if there is sufficient cash to pay the dividend.
- (b) The cash flow statement, using the president's cash flow projections, and showing the dividend payment separately is as follows:

Cash flow statement

| | |
|---|------------------------|
| Expected cash flows from operations | \$2,500,000 |
| Expected cash outflows from investing | (1,400,000) |
| Expected cash inflows from financing | <u>500,000</u> |
| Net expected cash flows during the year | 1,600,000 |
| Cash needed to pay the dividend | <u>(2,000,000)</u> |
| Net cash flow including the dividend | <u>(400,000)</u> |
| Opening cash balance | <u>750,000*</u> |
| Required closing cash balance | <u>\$ 350,000</u> |

* Determined as follows: $\$350,000 - (400,000) = \$750,000$.

The opening cash balance must be \$750,000 to sustain a dividend of \$2 million and leave \$350,000 cash in the bank.

Solutions to Additional Problems and Cases

A-2.1

**UPod Music
Company
Cash Flow Statement
For the year ended
December 31, 2010**

Cash flows from operating activities

| | | | |
|--|----|---------|------------|
| Net income | \$ | 102,000 | |
| Add (deduct) non-cash items: | | | |
| Depreciation expense (125,000 - 100,000) | | 25,000 | |
| Amortization expense - patents | | 7,000 | |
| Decrease in accounts receivable (30,000 - 50,000) | | 20,000 | |
| Increase in accounts payable (18,000 - 12,000) | | 6,000 | |
| Increase in notes payable current portion (25,000 - 10,000) | | 15,000 | |
| | | (75,000 | |
| Gain on sale of land | |) | |
| Increase in cash from operating activities | | | \$ 100,000 |

Cash flows from investing activities

| | | |
|--|----------|--------|
| Proceeds from the sale of land (125,000 - 50,000 + 75,000) | 150,000 | |
| | (100,000 | |
| Purchase of a new building (500,000 - 400,000) |) | |
| | (32,000 | |
| Purchase of new patents (45,000 - (20,000 - 7,000)) |) | |
| Increase in cash from investing activities | | 18,000 |

Cash flows from financing activities

| | | |
|---|----------|-----------|
| Increase in new long term bonds (269,000 - 200,000) | 69,000 | |
| Decrease in long term notes payable (165,000 - 278,000) | (113,000 | |
| |) | |
| | (56,000 | |
| Dividends paid |) | |
| Decrease in cash from financing activities | | (100,000) |
| Total increase in cash | | 18,000 |
| Cash at January 1, 2010 | | 12,000 |
| Cash at December 31, 2010 | \$ | 30,000 |

A.2-2**(a) Cash Flow Statement**

Wilson Sports Limited
Cash Flow Statement
For the year ended December
31, 2010

Cash flows from operating activities

| | | |
|---|-------------------|--------------|
| | \$ | |
| Net income | 200,000 | |
| Add (deduct) non-cash items: | | |
| Depreciation expense - building (125,000 - 100,000) | 25,000 | |
| Depreciation expense - machinery (120,000 - 105,000) | 15,000 | |
| Amortization expense - copyrights (63,000 - 10,000 - 44,000) | 9,000 | |
| Increase in accounts receivable (600,000 - 450,000) | (150,000) | |
| Increase in inventory (1,200,000 - 1,000,000) | (200,000) | |
| Decrease in prepaid insurance (50,000 - 62,000) | 12,000 | |
| Decrease in accounts payable (346,000 - 420,000) | (74,000) | |
| Increase in unearned revenues (50,000 - 20,000) | 30,000 | |
| Gain on sale of copyrights (50,000 - 10,000) | (40,000) | |
| | <u> </u> | |
| Increase/(Decrease) in cash from operating activities | | \$ (173,000) |

Cash flows from investing activities

| | | |
|---|-------------------|----------|
| Proceeds from the sale of copyrights (50,000) | 50,000 | |
| Purchase of a new building (500,000 - 400,000) | (100,000) | |
| Purchase of new machinery (325,000 - 285,000) | (40,000) | |
| | <u> </u> | |
| Increase/(Decrease) in cash from investing activities | | (90,000) |

Cash flows from financing activities

| | | |
|--|-----------|--|
| Decrease in bonds payable (1,200,000 - 1,000,000) | (200,000) | |
| Increase in bank loans payable (400,000 - 100,000) | | |

| | | |
|---|------------------|-----------------------|
| | 300,000 | |
| Increase in common shares (1,000,000 - 800,000) | 200,000 | |
| Dividends paid | <u>(137,000)</u> | |
| Increase in cash from financing activities | | <u>163,000</u> |
| Total decrease in cash | | (100,000) |
| Cash at January 1, 2010 | | <u>600,000</u> |
| Cash at December 31, 2010 | | <u><u>500,000</u></u> |

- (b) In 2010, Wilson used significant amounts of cash to buy another building, buy more machinery and inventory, and pay off some of its accounts payable. The company also used cash to repay some bonds payable and pay a dividend. Wilson financed these transactions by taking out more bank loans and selling more shares, as well as selling some copyrights.

A-2.3

First, calculate the account balance differences on the balance sheet.

Oshawa Air Cargo Ltd.

Balance Sheet as at December 31

| | 2010 | 2009 | Difference |
|---|--------------------------|--------------------------|------------|
| Cash | \$ 50,000 | \$ 40,000 | \$ 10,000 |
| Current assets | 160,500 | 170,620 | (10,120) |
| Land | 340,000 | 400,000 | (60,000) |
| Plant and equipment | 600,000 | 510,000 | 90,000 |
| Accumulated depreciation | <u>(200,000)</u> | <u>(155,000)</u> | NA |
| Total assets | <u>\$ 950,500</u> | <u>\$ 965,620</u> | |
| Current liabilities | \$ 95,000 | \$ 105,000 | (10,000) |
| Bonds payable, 2025 | <u>135,500</u> | <u>120,000</u> | 15,500 |
| Total liabilities | <u>230,500</u> | <u>225,000</u> | |
| Shareholders' equity | | | |
| Common shares | 500,000 | 500,000 | - |
| Retained earnings | <u>220,000</u> | <u>240,620</u> | (20,620) |
| Total shareholders' equity | <u>720,000</u> | <u>740,620</u> | |
| Total liabilities and shareholders' equity | <u><u>\$ 950,500</u></u> | <u><u>\$ 965,620</u></u> | |

Second, analyse the land sale. The land balance decreased by \$60,000 because of the sale.

The income statement shows a loss on sale of land of \$15,000. Therefore, the proceeds on the sale of land must have been $\$60,000 - 15,000 = \$45,000$.

Third, prepare the cash flow statement.

| Oshawa Air Cargo Ltd. Cash Flow Statement for the year ended December 31, 2010 | | |
|---|------------------|----------------------|
| Cash flows from operating activities | | |
| Net income | 134,000 | |
| Add back: Depreciation expense | 45,000 | |
| Add back: Loss on sale of land | 15,000 | |
| | <u>194,000</u> | |
| Add: decrease in current assets | 10,120 | |
| Less: decrease in current liabilities | <u>(10,000)</u> | |
| Increase in cash from operating activities | | 194,120 |
| Cash flows from investing activities | | |
| Proceeds from sale of land (\$60,000 - 15,000) | 45,000 | |
| Purchase of new plant and equipment | <u>(90,000)</u> | |
| Decrease in cash from investing activities | | (45,000) |
| Cash flows from financing activities | | |
| New bonds issued | 15,500 | |
| Dividends paid | <u>(154,620)</u> | |
| Decrease in cash from financing activities | | <u>(139,120)</u> |
| Total increase in cash | | 10,000 |
| Cash at January 1, 2010 | | <u>40,000</u> |
| Cash at December 31, 2010 | | <u><u>50,000</u></u> |