

# Using Accounting Information Exercises II

Larry M. Walther; Christopher J. Skousen



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# Using Accounting Information Exercises II

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Using Accounting Information Exercises II

1<sup>st</sup> edition

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|                  |           |
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# Problem 1

Mr. Mac Corporation has no material problem with uncollectible accounts or obsolete inventory. All sales and purchases are on account. The company provided the following information for the year ending 20X5:

|                                    |              |
|------------------------------------|--------------|
| Total sales                        | \$ 1,560,000 |
| Beginning accounts receivable      | 350,000      |
| Total purchases of inventory       | 1,080,000    |
| Beginning inventory                | 25,000       |
| Collections on accounts receivable | 1,440,000    |
| Payments on accounts payable       | 925,000      |
| Cost of goods sold                 | 1,065,000    |

- Calculate the “accounts receivable turnover ratio.”
- Calculate the “inventory turnover ratio.”
- If Mac’s competitors have a receivables turnover ratio of “7” and an inventory turnover ratio of “5,” would you initially conclude that Mac is better or worse than its competitors in managing receivables and inventory?

## Worksheet 1

a)

$$\begin{aligned} & \text{Accounts Receivable Turnover Ratio} \\ & = \\ & \text{Net Credit Sales/Average Net Accounts Receivable*} \\ & = \end{aligned}$$

b)

$$\begin{aligned} & \text{Inventory Turnover Ratio} \\ & = \\ & \text{Cost of Goods Sold/Average Inventory**} \\ & = \end{aligned}$$

c)

## Solution 1

a)

$$\begin{aligned} & \text{Accounts Receivable Turnover Ratio} \\ & = \\ & \text{Net Credit Sales/Average Net Accounts Receivable*} \\ & = \\ & \$1,560,000/[(\$350,000 + \$470,000)/2] \\ & = \\ & \$1,560,000/\$410,000 \\ & = \\ & \mathbf{3.80} \end{aligned}$$

\* Ending accounts receivable = \$350,000 + \$1,560,000 sales – \$1,440,000 collections = \$470,000

b)

$$\begin{aligned} & \text{Inventory Turnover Ratio} \\ & = \\ & \text{Cost of Goods Sold/Average Inventory**} \\ & = \\ & \$1,065,000/[(\$25,000 + \$40,000)/2] \\ & = \\ & \$1,065,000/\$32,500 \\ & = \\ & \mathbf{32.77} \end{aligned}$$

\*\* Ending inventory = \$25,000 + \$1,080,000 purchases – \$1,065,000 cost of goods sold = \$40,000

c) Mac is doing much better than its competitors as it relates to managing inventory (32.77 vs. 5), but is lagging behind as it relates to collecting receivables (3.80 vs. 7).

# Problem 2

Beverly Monson is the chief financial officer for Monson Construction. She delivered the following comments in a recent conference call with analysts that follow the company:

“20X7 was another excellent year. Net income was a record setting \$3,500,000. We maintained our overall net profit on sales at the historic 15% level. This occurred despite an increase in raw material costs that lowered our gross margin to 45%. We are proud that we continue to maintain a healthy balance sheet that is free of any liabilities. All of our financing continues to be provided by our common and preferred shareholders. Our beginning of year equity of \$65,000,000 was sufficient to fund our capital needs, and no additional shares were issued this year. Our “4% preferred shareholders“ have again received their full \$1,500,000 in dividends for the year. The remaining earnings have been reinvested in the company.“

- a) Use profitability ratios to determine Monson’s sales, cost of goods sold, gross profit, and net income.
- b) Calculate Monson’s return on assets and return on equity. Which is higher, and why?

## Worksheet 2

- a)
  - Sales
  - Cost of goods sold
  - Gross profit
  - Selling, general & administrative
  - Net income

b)

$$\begin{aligned} & \text{Return on Assets Ratio} \\ & = \\ & \frac{(\text{Net Income} + \text{Interest Expense})}{\text{Average Assets}} \\ & = \end{aligned}$$

$$\begin{aligned} & \text{Return on Equity Ratio} \\ & = \\ & \frac{(\text{Net Income} - \text{Preferred Dividends})}{\text{Average Common Equity}} \\ & = \end{aligned}$$

## Solution 2

a)

|                                   |      |    |                         |
|-----------------------------------|------|----|-------------------------|
| Sales                             | 100% | \$ | 52,500,000              |
| Cost of goods sold                | 55%  |    | <u>28,875,000</u>       |
| Gross profit                      | 45%  | \$ | 23,625,000              |
| Selling, general & administrative | 30%  |    | <u>20,125,000</u>       |
| Net income                        | 15%  | \$ | <u><u>3,500,000</u></u> |

b)

$$\begin{aligned} & \text{Return on Assets Ratio} \\ & = \\ & \frac{(\text{Net Income} + \text{Interest Expense})}{\text{Average Assets}} \\ & = \\ & \frac{(\$3,500,000 + \$0)}{(\$65,000,000 + (\$65,000,000 + \$3,500,000 - \$1,500,000))/2} \\ & = \\ & \mathbf{5.303\%} \end{aligned}$$

$$\begin{aligned}
 & \text{Return on Equity Ratio} \\
 & = \\
 & (\text{Net Income} - \text{Preferred Dividends}) \\
 & \div \\
 & \text{Average Common Equity} \\
 & = \\
 & (\$3,500,000 - \$1,500,000) \\
 & \div \\
 & (\$27,500,000^* + (\$27,500,000 + \$3,500,000 - \$1,500,000))/2 \\
 & = \\
 & \mathbf{7.018\%}
 \end{aligned}$$

\* Beginning common equity = \$65,000,000 – preferred equity (\$37,500,000) = \$27,500,000

Preferred equity = \$1,500,000 dividend ÷ 4% = \$37,500,000

Return on equity is higher than return on assets because the overall rate of return (5.303%) is higher than the 4% dividend on preferred equity. Essentially, the company is obtaining 4% financing from preferred shareholders, and deploying this capital to earn a higher rate of return. The benefit of this strategy is reflected in the higher rate of return for common shareholders.

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# Problem 3

The accountant for Quick Cafe used a spreadsheet to prepare information needed to prepare the statement of cash flows for the year ending December 31, 20X6. However, the data were accidentally sorted alphabetically into the following listing of items. To compound the problem, the “add” and “subtract” notations for each line item were also deleted. Review the information, and prepare a correct presentation, using the indirect approach. The beginning cash balance was \$95,700, and the ending cash balance was \$622,500.

|   |    |           |
|---|----|-----------|
| Bought building by issuing common stock | \$ | 1,275,000 |
| Decrease in accounts payable            |    | 51,000    |
| Decrease in accounts receivable         |    | 31,500    |
| Depreciation expense                    |    | 102,000   |
| Dividends on common                     |    | 75,000    |
| Gain on sale of land                    |    | 30,000    |
| Increase in income taxes payable        |    | 10,500    |
| Increase in inventory                   |    | 41,700    |
| Increase in prepaid insurance           |    | 4,500     |
| Net income                              |    | 322,500   |
| Purchase of equipment                   |    | 112,500   |
| Repayment of long-term note payable     |    | 270,000   |
| Sale of land                            |    | 645,000   |

Worksheet 3

| <b>QUICK CAFÉ</b>                              |             |
|--|-------------|
| <b>Statement of Cash Flows</b>                 |             |
| <b>For the year ending December 31, 20X6</b>   |             |
| <b>Cash flows from operating activities:</b>   |             |
| <br>   |             |
| <br>   |             |
| <br>   |             |
| <br>   |             |
| <br>   |             |
| <b>Cash flows from investing activities:</b>   |             |
| <br>   |             |
| <br>   |             |
| <br>   |             |
| <br>   |             |
| <b>Cash flows from financing activities:</b>   |             |
| <br>   |             |
| <br>   |             |
| <br>   |             |
| <b>Net increase in cash</b>                    | \$ -        |
| <b>Cash balance at January 1, 20X6</b>         | -           |
| <b>Cash balance at December 31, 20X6</b>       | <u>\$ -</u> |
| <b>Noncash investing/financing activities:</b> |             |
|  | <u>\$ -</u> |

## Solution 3

| <b>QUICK CAFÉ</b>                                |            |                            |
|--|------------|----------------------------|
| <b>Statement of Cash Flows</b>                   |            |                            |
| <b>For the year ending December 31, 20X6</b>     |            |                            |
| <b>Cash flows from operating activities:</b>     |            |                            |
| Net income                                       |            | \$ 322,500                 |
| Add (deduct) noncash effects on operating income |            |                            |
| Depreciation expense                             | \$ 102,000 |                            |
| Gain on sale of land                             | (30,000)   |                            |
| Decrease in accounts receivable                  | 31,500     |                            |
| Increase in inventory                            | (41,700)   |                            |
| Increase in prepaid insurance                    | (4,500)    |                            |
| Decrease in accounts payable                     | (51,000)   |                            |
| Increase in income taxes payable                 | 10,500     | 16,800                     |
| Net cash provided by operating activities        |            | \$ 339,300                 |
| <b>Cash flows from investing activities:</b>     |            |                            |
| Sale of land                                     | \$ 645,000 |                            |
| Purchase of equipment                            | (112,500)  |                            |
| Net cash provided by investing activities        |            | 532,500                    |
| <b>Cash flows from financing activities:</b>     |            |                            |
| Repayment of long-term note payable              | (270,000)  |                            |
| Dividends on common                              | (75,000)   |                            |
| Net cash used by financing activities            |            | (345,000)                  |
| <b>Net increase in cash</b>                      |            | <b>\$ 526,800</b>          |
| <b>Cash balance at January 1, 20X6</b>           |            | <b>95,700</b>              |
| <b>Cash balance at December 31, 20X6</b>         |            | <b><u>\$ 622,500</u></b>   |
| <b>Noncash investing/financing activities:</b>   |            |                            |
| Bought building by issuing common stock          |            | <b><u>\$ 1,275,000</u></b> |

## Problem 4

Cambridge Corporation reported net income of \$200,000 for 20X8. The income statement revealed sales of \$2,000,000; gross profit of \$1,040,000; selling and administrative costs of \$680,000; interest expense of \$40,000; and income taxes of \$120,000.

The selling and administrative expenses included \$50,000 for depreciation. No equipment was sold during the year. Equipment purchases were made with cash. Prepaid insurance included in the balance sheet related to administrative costs. All accounts payable included in the balance sheet relate to inventory purchases. The change in retained earnings is attributable to net income and dividends. The increase in common stock and additional paid-in capital is due to issuing additional shares for cash.

Using the direct approach, prepare a statement of cash flows (excluding the supplemental reconciliation of net income to operating cash flow) for Cambridge for the year ending December 31, 20X8. Comparative balance sheets for Cambridge follow.

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| <b>CAMBRIDGE CORPORATION</b>      |                     |                     |
|-----------------------------------|---------------------|---------------------|
| <b>Balance Sheet</b>              |                     |                     |
| <b>December 31, 20X7 and 20X8</b> |                     |                     |
|                                   | 20X8                | 20X7                |
| <b>Assets</b>                     |                     |                     |
| Cash                              | \$ 917,400          | \$ 942,900          |
| Accounts receivable               | 398,500             | 343,000             |
| Inventories                       | 497,200             | 557,600             |
| Prepaid insurance                 | 26,000              | 22,000              |
| Land                              | 500,000             | 500,000             |
| Building and equipment            | 3,000,000           | 2,600,000           |
| Less: Accumulated depreciation    | (410,000)           | (360,000)           |
| Total assets                      | <u>\$ 1,275,000</u> | <u>\$ 1,275,000</u> |
| <b>Liabilities</b>                |                     |                     |
| Accounts payable                  | \$ 171,400          | \$ 186,800          |
| Interest payable                  | 21,000              | 30,000              |
| Income taxes payable              | 44,000              | 16,000              |
| <b>Stockholders' equity</b>       |                     |                     |
| Common stock                      | 1,420,000           | 1,400,000           |
| Paid in capital in excess of par  | 1,980,000           | 1,800,000           |
| Retained earnings                 | 1,292,700           | 1,172,700           |
| Total liabilities and equity      | <u>\$ 1,275,000</u> | <u>\$ 1,275,000</u> |

Worksheet 4

| <b>CAMBRIDGE CORPORATION</b>                     |             |                    |
|--|-------------|--------------------|
| <b>Statement of Cash Flows (Direct Approach)</b> |             |                    |
| <b>For the year ending December 31, 20X8</b>     |             |                    |
| <b>Cash flows from operating activities:</b>     |             |                    |
| Cash received from customers                     |             |                    |
| Less cash paid for:                              |             | \$ -               |
| Merchandise inventory                            | \$ -        |                    |
| Selling and administrative expenses              | -           |                    |
| Interest   | -           |                    |
| Income taxes                                     | -           | -                  |
| Net cash provided by operating activities        |             | <u>\$ -</u>        |
| <b>Cash flows from investing activities:</b>     |             |                    |
| Purchase of equipment                            | <u>\$ -</u> |                    |
| Net cash used by investing activities            |             | -                  |
| <b>Cash flows from financing activities:</b>     |             |                    |
| Proceeds from issuing stock                      | \$ -        |                    |
| Dividends on common                              | -           |                    |
| Net cash provided by financing activities        |             | <u>-</u>           |
| <b>Net decrease in cash</b>                      |             | <u>\$ -</u>        |
| <b>Cash balance at January 1, 20X8</b>           |             | -                  |
| <b>Cash balance at December 31, 20X8</b>         |             | <u><u>\$ -</u></u> |

Downl

Cash received from customers:

Cash paid for inventory:

Cash paid for selling and admin.:

Cash paid for interest:

Cash paid for income taxes:

#### Solution 4

| <b>CAMBRIDGE CORPORATION</b>                     |              |                          |
|--|--------------|--------------------------|
| <b>Statement of Cash Flows (Direct Approach)</b> |              |                          |
| <b>For the year ending December 31, 20X8</b>     |              |                          |
| <b>Cash flows from operating activities:</b>     |              |                          |
| Cash received from customers                     |              |                          |
| Less cash paid for:                              |              | \$ 1,944,500             |
| Merchandise inventory                            | \$ 915,000   |                          |
| Selling and administrative expenses              | 634,000      |                          |
| Interest   | 49,000       |                          |
| Income taxes                                     | 92,000       | (1,690,000)              |
| Net cash provided by operating activities        |              | \$ 254,500               |
| <b>Cash flows from investing activities:</b>     |              |                          |
| Purchase of equipment                            | \$ (400,000) |                          |
| Net cash used by investing activities            |              | (400,000)                |
| <b>Cash flows from financing activities:</b>     |              |                          |
| Proceeds from issuing stock                      | \$ 200,000   |                          |
| Dividends on common                              | (80,000)     |                          |
| Net cash provided by financing activities        |              | 120,000                  |
| <b>Net decrease in cash</b>                      |              | <b>\$ (25,500)</b>       |
| <b>Cash balance at January 1, 20X8</b>           |              | <b>942,900</b>           |
| <b>Cash balance at December 31, 20X8</b>         |              | <b><u>\$ 917,400</u></b> |

Cash received from customers: Sales – Increase in Receivables

$$\$2,000,000 - (\$389,500 - \$343,000) = \$1,944,500$$

Cash paid for inventory: COGS – Decrease in Inventory + Decrease in Payables

$$(\$2,000,000 - \$1,040,000) - (\$557,600 - \$497,200) + (\$186,800 - \$171,400) = \$915,000$$

Cash paid for selling and admin.: Selling/Admin – Depreciation + Increase in Prepaids

$$\$680,000 - \$50,000 + (\$26,000 - \$22,000) = \$634,000$$

Cash paid for interest: Interest Expense + Decrease in Interest Payable

$$\$40,000 + (\$30,000 - \$21,000) = \$49,000$$

Cash paid for income taxes: Income Tax Expense – Increase in Taxes Payable

$$\$120,000 - (\$44,000 - \$16,000) = \$92,000$$

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# Problem 5

Cambridge Corporation reported net income of \$200,000 for 20X8. The income statement revealed sales of \$2,000,000; gross profit of \$1,040,000; selling and administrative costs of \$680,000; interest expense of \$40,000; and income taxes of \$120,000.

The selling and administrative expenses included \$50,000 for depreciation. No equipment was sold during the year. Equipment purchases were made with cash. Prepaid insurance included in the balance sheet related to administrative costs. All accounts payable included in the balance sheet relate to inventory purchases. The change in retained earnings is attributable to net income and dividends. The increase in common stock and additional paid-in capital is due to issuing additional shares for cash.

Using the indirect approach, prepare a statement of cash flows for Cambridge for the year ending December 31, 20X8. Comparative balance sheets for Cambridge follow.

| <b>CAMBRIDGE CORPORATION</b>      |                     |                     |
|-----------------------------------|---------------------|---------------------|
| <b>Balance Sheet</b>              |                     |                     |
| <b>December 31, 20X7 and 20X8</b> |                     |                     |
|                                   | 20X8                | 20X7                |
| <b>Assets</b>                     |                     |                     |
| Cash                              | \$ 917,400          | \$ 942,900          |
| Accounts receivable               | 398,500             | 343,000             |
| Inventories                       | 497,200             | 557,600             |
| Prepaid insurance                 | 26,000              | 22,000              |
| Land                              | 500,000             | 500,000             |
| Building and equipment            | 3,000,000           | 2,600,000           |
| Less: Accumulated depreciation    | (410,000)           | (360,000)           |
| Total assets                      | <u>\$ 4,929,100</u> | <u>\$ 4,605,500</u> |
| <b>Liabilities</b>                |                     |                     |
| Accounts payable                  | \$ 171,400          | \$ 186,800          |
| Interest payable                  | 21,000              | 30,000              |
| Income taxes payable              | 44,000              | 16,000              |
| <b>Stockholders' equity</b>       |                     |                     |
| Common stock                      | 1,420,000           | 1,400,000           |
| Paid in capital in excess of par  | 1,980,000           | 1,800,000           |
| Retained earnings                 | 1,292,700           | 1,172,700           |
| Total liabilities and equity      | <u>\$ 4,929,100</u> | <u>\$ 4,605,500</u> |

## Worksheet 5

| <b>CAMBRIDGE CORPORATION</b>                       |                             |                                    |
|--|-----------------------------|------------------------------------|
| <b>Statement of Cash Flows (Indirect Approach)</b> |                             |                                    |
| <b>For the year ending December 31, 20X8</b>       |                             |                                    |
| <b>Cash flows from operating activities:</b>       |                             |                                    |
| Net income   |                             | \$ -                               |
| Add (deduct) noncash effects on operating income   |                             |                                    |
| Depreciation expense                               | \$ -                        |                                    |
| Increase in accounts receivable                    | -                           |                                    |
| Decrease in inventory                              | -                           |                                    |
| Increase in prepaid insurance                      | -                           |                                    |
| Decrease in accounts payable                       | -                           |                                    |
| Decrease in interest payable                       | -                           |                                    |
| Increase in income taxes payable                   | -                           |                                    |
| Net cash provided by operating activities          | <u>                    </u> | \$ -                               |
| <b>Cash flows from investing activities:</b>       |                             |                                    |
| Purchase of equipment                              | <u>                    </u> | -                                  |
| Net cash used by investing activities              |                             | -                                  |
| <b>Cash flows from financing activities:</b>       |                             |                                    |
| Proceeds from issuing stock                        | <u>                    </u> | -                                  |
| Dividends on common                                | -                           |                                    |
| Net cash provided by financing activities          |                             | <u>                    </u>        |
| <b>Net decrease in cash</b>                        |                             | <b>\$ -</b>                        |
| <b>Cash balance at January 1, 20X8</b>             |                             | <b>-</b>                           |
| <b>Cash balance at December 31, 20X8</b>           |                             | <b><u>                    </u></b> |

## Solution 5

| <b>CAMBRIDGE CORPORATION</b>                       |              |                          |
|--|--------------|--------------------------|
| <b>Statement of Cash Flows (Indirect Approach)</b> |              |                          |
| <b>For the year ending December 31, 20X8</b>       |              |                          |
| <b>Cash flows from operating activities:</b>       |              |                          |
| Net income   |              | \$ 200,000               |
| Add (deduct) noncash effects on operating income   |              |                          |
| Depreciation expense                               | \$ 915,000   |                          |
| Increase in accounts receivable                    | (55,500)     |                          |
| Decrease in inventory                              | 60,400       |                          |
| Increase in prepaid insurance                      | (4,000)      |                          |
| Decrease in accounts payable                       | (15,400)     |                          |
| Decrease in interest payable                       | (9,000)      |                          |
| Increase in income taxes payable                   | 28,000       | 54,500                   |
| Net cash provided by operating activities          |              | \$ 254,500               |
| <b>Cash flows from investing activities:</b>       |              |                          |
| Purchase of equipment                              | \$ (400,000) |                          |
| Net cash used by investing activities              |              | (400,000)                |
| <b>Cash flows from financing activities:</b>       |              |                          |
| Proceeds from issuing stock                        | \$ 200,000   |                          |
| Dividends on common                                | (80,000)     |                          |
| Net cash provided by financing activities          |              | 120,000                  |
| <b>Net decrease in cash</b>                        |              | <b>\$ (25,500)</b>       |
| <b>Cash balance at January 1, 20X8</b>             |              | <b>942,900</b>           |
| <b>Cash balance at December 31, 20X8</b>           |              | <b><u>\$ 917,400</u></b> |

# Problem 6

Smithson Corporation's stock is selling for \$36 per share. Smithson provided the following financial statements. Use these statements to prepare a comprehensive ratio analysis. The blank worksheet includes a table of the ratios you should calculate.

| <b>SMITHSON CORPORATION</b>                  |                     |                     |
|--|---------------------|---------------------|
| <b>Comparative Balance Sheet</b>             |                     |                     |
| <b>December 31, 20X8 and 20X7</b>            |                     |                     |
| <b>ASSETS</b>                                | 20X8                | 20X7                |
| <b>Current assets</b>                        |                     |                     |
| Cash   | \$ 1,200,000        | \$ 740,000          |
| Accounts receivable                          | 1,050,000           | 580,000             |
| Inventories                                  | 270,000             | 220,000             |
| <b>Total current assets</b>                  | <b>\$ 2,520,000</b> | <b>\$ 1,540,000</b> |
| <b>Property, plant &amp; equip.</b>          |                     |                     |
| Land   | \$ 600,000          | \$ 400,000          |
| Building                                     | 1,950,000           | 1,300,000           |
| Equipment                                    | 3,150,000           | 1,800,000           |
|  | <b>\$ 5,700,000</b> | <b>\$ 1,750,000</b> |
| Less: Accumulated depreciation               | (1,095,000)         | (650,000)           |
| <b>Total property, plant &amp; equipment</b> | <b>\$ 4,605,000</b> | <b>\$ 1,425,000</b> |
| <b>Total assets</b>                          | <b>\$ 7,125,000</b> | <b>\$ 2,965,000</b> |
| <b>LIABILITIES</b>                           |                     |                     |
| <b>Current liabilities</b>                   |                     |                     |
| Accounts payable                             | \$ 480,000          | \$ 400,000          |
| Interest payable                             | 150,000             | 60,000              |
| <b>Total current liabilities</b>             | <b>\$ 630,000</b>   | <b>\$ 230,000</b>   |
| <b>Long-term liabilities</b>                 |                     |                     |
| Long-term note payable                       | 2,400,000           | 1,400,000           |
| <b>Total liabilities</b>                     | <b>\$ 3,030,000</b> | <b>\$ 930,000</b>   |
| <b>STOCKHOLDERS' EQUITY</b>                  |                     |                     |
| Common stock (\$0.50 par)                    | \$ 100,000          | \$ 100,000          |
| Paid-in capital in excess of par             | 655,000             | 655,000             |
| Retained earnings                            | 3,340,000           | 1,280,000           |
| <b>Total stockholders' equity</b>            | <b>\$ 4,095,000</b> | <b>\$ 2,035,000</b> |
| <b>Total liabilities and equity</b>          | <b>\$ 7,125,000</b> | <b>\$ 2,965,000</b> |

| <b>SMITHSON CORPORATION</b>                  |            |                     |
|--|------------|---------------------|
| <b>Income Statement</b>                      |            |                     |
| <b>For the Year Ending December 31, 20X8</b> |            |                     |
| Revenues                                     |            | \$ 10,110,000       |
| Cost of goods sold                           |            | <u>5,762,500</u>    |
| Gross profit                                 |            | \$ 4,347,500        |
| Operating Expenses                           |            |                     |
| Salaries                                     | \$ 735,000 |                     |
| Interest                                     | 195,000    |                     |
| Depreciation                                 | 445,000    |                     |
| Other operating expenses                     | 462,500    | 1,837,500           |
| Income before income taxes                   |            | \$ 2,510,000        |
| Less: Income taxes                           |            | <u>300,000</u>      |
| Net income                                   |            | <u>\$ 2,210,000</u> |

| <b>SMITHSON CORPORATION</b>                  |  |                     |
|--|--|---------------------|
| <b>Statement of Retained Earnings</b>        |  |                     |
| <b>For the Year Ending December 31, 20X8</b> |  |                     |
| Beginning retained earnings, January 1       |  | \$ 1,280,000        |
| Plus: Net income                             |  | <u>2,210,000</u>    |
|  |  | \$ 3,490,000        |
| Less: Dividends                              |  | <u>150,000</u>      |
| Ending retained earnings, December 31        |  | <u>\$ 3,340,000</u> |

Worksheet 6

|                                      |                         |
|--------------------------------------|-------------------------|
| <b>Current Ratio</b>                 | <b>4.00</b>             |
| Current Assets ÷ Current Liabilities | \$2,520,000 ÷ \$630,000 |

**Quick Ratio**

---

**Debt to Total Assets Ratio**

---

**Debt to Total Equity Ratio**

---

**Times Interest Earned Ratio**

---

**Accounts Receivable Turnover Ratio**

---

**Inventory Turnover Ratio**

---

**Net Profit on Sales**

---

**Gross Profit Margin**

---

**Return on Assets**

---

**Return on Equity**

---

**EPS**

---

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**P/E**

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**Dividend Rate/Yield**

---

**Dividend Payout Ratio**

---

**Book Value Per Share**

---

## Solution 6

|  |                            |
|--|----------------------------|
| <b>Current Ratio</b>   | <b>4.00</b>                |
| Current Assets ÷ Current Liabilities   | \$2,520,000 ÷ \$630,000    |
| <b>Quick Ratio</b>   | <b>3.57</b>                |
| (Cash + Short-term Investments + Accounts Receivable) ÷<br>Current Liabilities | \$2,250,000 ÷ \$630,000    |
| <b>Debt to Total Assets Ratio</b>  | <b>0.43</b>                |
| Total Debt ÷ Total Assets  | \$3,030,000 ÷ \$7,125,000  |
| <b>Debt to Total Equity Ratio</b>  | <b>0.74</b>                |
| Total Debt ÷ Total Equity  | \$3,030,000 ÷ \$4,095,000  |
| <b>Times Interest Earned Ratio</b>   | <b>12.87</b>               |
| "Income Before Income Taxes and Interest ÷<br>Interest Charges"                | \$2,510,000 ÷ \$195,000    |
| <b>Accounts Receivable Turnover Ratio</b>                                      | <b>12.40</b>               |
| "Net Credit Sales ÷<br>Average Net Accounts Receivable"                        | \$10,110,000 ÷ \$815,000   |
| <b>Inventory Turnover Ratio</b>  | <b>23.52</b>               |
| Cost of Goods Sold ÷ Average Inventory   | \$5,762,500 ÷ \$245,000    |
| <b>Net Profit on Sales</b>   | <b>21.86%</b>              |
| Net Income ÷ Net Sales   | \$2,210,000 ÷ \$10,110,000 |

|  |                               |
|--|-------------------------------|
| <b>Gross Profit Margin</b>   | <b>43.00%</b>                 |
| Gross Profit ÷ Net Sales   | \$4,347,500 ÷ \$10,110,000    |
| <b>Return on Assets</b>  | <b>47.67%</b>                 |
| "(Net Income + Interest Expense) ÷<br>Average Assets"                      | \$2,405,000 ÷ \$5,045,000     |
| <b>Return on Equity</b>  | <b>72.10%</b>                 |
| "(Net Income – Preferred Dividends) ÷<br>Average Common Equity"            | \$550,000 ÷ \$3,065,000       |
| <b>EPS</b>   | <b>\$11.05</b>                |
| "Income Available to Common ÷<br>Weighted-Average Number of Common Shares" | \$2,210,000 ÷ 200,000         |
| <b>P/E</b>   | <b>3.26</b>                   |
| "Market Price Per Share ÷<br>Earnings Per Share"                           | \$36.00 ÷ \$11.05             |
| <b>Dividend Rate/Yield</b>   | <b>2.08%</b>                  |
| "Annual Cash Dividend ÷<br>Market Price Per Share"                         | (\$150,000/200,000) ÷ \$36.00 |
| <b>Dividend Payout Ratio</b>   | <b>6.79%</b>                  |
| "Annual Cash Dividend ÷<br>Earnings Per Share"                             | (\$150,000/200,000) ÷ \$11.05 |
| <b>Book Value Per Share</b>  | <b>\$20.48</b>                |
| "Common Equity ÷<br>Common Shares Outstanding"                             | \$4,095,000 ÷ 200,000         |

# Problem 7

Dursteler Systems presented the following comparative balance sheet:

| <b>DURSTELER SYSTEMS</b>          |                     |    |                  |
|-----------------------------------|---------------------|----|------------------|
| <b>Balance Sheet</b>              |                     |    |                  |
| <b>December 31, 20X7 and 20X8</b> |                     |    |                  |
|                                   | 20X8                |    | 20X7             |
| <b>Assets</b>                     |                     |    |                  |
| Cash                              | \$ 504,150          | \$ | 108,975          |
| Accounts receivable               | 164,700             |    | 131,700          |
| Inventories                       | 175,875             |    | 237,675          |
| Land                              | 975,000             |    | 225,000          |
| Building and equipment            | 675,000             |    | 642,000          |
| Less: Accumulated depreciation    | (376,350)           |    | (326,250)        |
| Total assets                      | <u>\$ 2,118,375</u> | \$ | <u>1,019,100</u> |
| <b>Liabilities</b>                |                     |    |                  |
| Accounts payable                  | \$ 83,325           | \$ | 70,050           |
| Utilities payable                 | 1,875               |    | 3,000            |
| Interest payable                  | 3,750               |    | -                |
| Long-term note payable            | 750,000             |    | -                |
| <b>Stockholders' equity</b>       | -                   | \$ | -                |
| Common stock, \$1 par             | 225,000             |    | 187,500          |
| Paid in capital in excess of par  | 420,000             |    | 337,500          |
| Retained earnings                 | 634,425             |    | 421,050          |
| Total liabilities and equity      | <u>\$ 2,118,375</u> | \$ | <u>1,019,100</u> |

Additional information about transactions and events occurring in 20X8 is as follows:

Dividends of \$79,275 were declared and paid.

Accounts payable and accounts receivable relate solely to purchases and sales of inventory.

The increase in land resulted from the purchase of land via issuance of the long-term note payable. No buildings were purchased or sold. Equipment was purchased.

In January of 20X8, equipment with an original cost of \$56,250 was sold for \$37,500.

The increase in paid-in capital all resulted from issuing additional shares for cash.

The income statement for the year ending 20X8 follows:

| <b>DUSTELER COMPUTER SYSTEMS</b>             |               |                   |
|--|---------------|-------------------|
| <b>Income Statement</b>                      |               |                   |
| <b>For the Year Ending December 31, 20X8</b> |               |                   |
| Sales  |               | \$ 2,142,000      |
| Cost of goods sold                           |               | <u>1,182,225</u>  |
| Gross profit                                 |               | \$959,775         |
| Operating expenses and other                 |               |                   |
| Salaries                                     | \$ 325,125    |                   |
| Utilities                                    | 48,150        |                   |
| Interest                                     | 45,000        |                   |
| Depreciation                                 | 57,600        |                   |
| Loss on sale of equipment                    | <u>11,250</u> | <u>487,125</u>    |
| Income before income tax                     |               | 472,650           |
| Income tax                                   |               | <u>180,000</u>    |
| Net income                                   |               | <u>\$ 292,650</u> |

Prepare Travis Engineering’s statement of cash flows for the year ending 20X8. Use the direct approach, and prepare the supplement reconciliation of net income to operating cash flows.

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Worksheet 7

| <b>DURSTELER SYSTEMS</b><br><b>Statement of Cash Flows</b><br><b>For the year ending December 31, 20X8</b> |      |                |
|--|------|----------------|
| <b>Cash flows from operating activities:</b>   |      |                |
| Cash received from customers   |      | \$ -           |
| Less cash paid for:  |      |                |
| Merchandise inventory  | \$ - |                |
| Salaries   | -    |                |
| Utilities  | -    |                |
| Interest   | -    |                |
| Income taxes   | -    |                |
| Net cash provided by operating activities  |      | \$ -           |
| <b>Cash flows from investing activities:</b>   |      |                |
| Sale of equipment  | \$ - |                |
| Purchase of equipment  | -    |                |
| Net cash used by investing activities  |      | -              |
| <b>Cash flows from financing activities:</b>   |      |                |
| Proceeds from issuing stock  | \$ - |                |
| Dividends on common  | -    |                |
| Net cash provided by financing activities  |      | -              |
| <b>Net increase in cash</b>  |      | <b>\$ -</b>    |
| <b>Cash balance at January 1, 20X8</b>   |      | <b>108,975</b> |
| <b>Cash balance at December 31, 20X8</b>   |      | <b>\$ -</b>    |
| <b>Noncash investing/financing activities</b>  |      |                |
| Issued note payable for land   |      | \$ -           |

|  |      |            |
|--|------|------------|
| <b>Reconciliation of net income to cash flows from operating activities:</b> |      |            |
| Net income   |      | \$ 292,650 |
| Add (deduct) noncash effects on operating income                             |      |            |
| Depreciation expense   | \$ - |            |
| Loss on sale of equipment  | -    |            |
| Increase in accounts receivable  | -    |            |
| Decrease in inventory  | -    |            |
| Increase in accounts payable   | -    |            |
| Decrease in utilities payable  | -    |            |
| Increase in interest payable   | -    |            |
| Net cash provided by operating activities                                    |      | \$ -       |

## Solution 7

| <b>DURSTELER SYSTEMS</b>                      |              |                          |
|---|--------------|--------------------------|
| <b>Statement of Cash Flows</b>                |              |                          |
| <b>For the year ending December 31, 20X8</b>  |              |                          |
| <b>Cash flows from operating activities:</b>  |              |                          |
| Cash received from customers                  |              | \$ 2,109,000             |
| Less cash paid for:                           |              |                          |
| Merchandise inventory                         | \$ 1,107,150 |                          |
| Salaries                                      | 325,125      |                          |
| Utilities                                     | 49,275       |                          |
| Interest                                      | 41,250       |                          |
| Income taxes                                  | 180,000      | (1,702,800)              |
| Net cash provided by operating activities     |              | \$ 406,200               |
| <b>Cash flows from investing activities:</b>  |              |                          |
| Sale of equipment                             | \$ 37,500    |                          |
| Purchase of equipment                         | (89,250)     |                          |
| Net cash used by investing activities         |              | (51,750)                 |
| <b>Cash flows from financing activities:</b>  |              |                          |
| Proceeds from issuing stock                   | \$ 120,000   |                          |
| Dividends on common                           | (79,275)     |                          |
| Net cash provided by financing activities     |              | 40,725                   |
| <b>Net increase in cash</b>                   |              | <b>\$ 395,175</b>        |
| <b>Cash balance at January 1, 20X8</b>        |              | <b>108,975</b>           |
| <b>Cash balance at December 31, 20X8</b>      |              | <b><u>\$ 504,150</u></b> |
| <b>Noncash investing/financing activities</b> |              |                          |
| Issued note payable for land                  |              | <u>\$ 750,000</u>        |

|  |           |            |
|--|-----------|------------|
| <b>Reconciliation of net income to cash flows from operating activities:</b> |           |            |
| Net income   |           | \$ 292,650 |
| Add (deduct) noncash effects on operating income                             |           |            |
| Depreciation expense   | \$ 57,600 |            |
| Loss on sale of equipment  | 11,250    |            |
| Increase in accounts receivable  | (33,000)  |            |
| Decrease in inventory  | 61,800    |            |
| Increase in accounts payable   | 13,275    |            |
| Decrease in utilities payable  | (1,125)   |            |
| Increase in interest payable   | 3,750     | 113,550    |
| Net cash provided by operating activities                                    |           | \$ 406,200 |

Cash received from customers: Sales – Increase in Receivables

$$\$2,142,000 - (\$164,700 - \$131,700) = \$2,109,000$$

Cash paid for inventory: COGS – Decrease in Inventory – Increase in Payables

$$\$1,182,225 - (\$237,675 - \$175,875) - (\$83,325 - \$70,050) = \$1,107,150$$

Cash paid for utilities: Utilities Expense + Decrease in Utilities Payable

$$\$48,150 + (\$3,000 - \$1,875) = \$49,275$$

Cash paid for interest: Interest Expense – Increase in Interest Payable

$$\$45,000 - \$3,750 = \$41,250$$

Cash paid for equipment: Ending Balance + Cost of Item Sold – Beginning Balance

$$\$675,000 + \$56,250 - \$642,000 = \$89,250$$



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# Problem 8

Cutler Design presented the following comparative balance sheet:

| <b>CUTLER DESIGN CORPORATION</b>             |                     |                     |
|--|---------------------|---------------------|
| <b>Comparative Balance Sheet</b>             |                     |                     |
| <b>December 31, 20X9 and 20X8</b>            |                     |                     |
| <b>ASSETS</b>                                | 20X9                | 20X8                |
| <b>Current assets</b>                        |                     |                     |
| Cash   | \$ 1,162,000        | \$ 15,750           |
| Accounts receivable                          | 656,250             | 603,750             |
| Inventories                                  | 262,500             | 280,000             |
| Prepaid expenses                             | 61,250              | 43,750              |
| <b>Total current assets</b>                  | <u>\$ 2,142,000</u> | <u>\$ 943,250</u>   |
| <b>Property, plant &amp; equip.</b>          |                     |                     |
| Land   | \$ 525,000          | \$ 700,000          |
| Building                                     | 1,225,000           | 1,225,000           |
| Equipment                                    | 927,500             | 787,500             |
|  | <u>\$ 2,677,500</u> | <u>\$ 2,712,500</u> |
| Less: Accumulated depreciation               | (525,000)           | (472,500)           |
| <b>Total property, plant &amp; equipment</b> | <u>\$ 2,152,500</u> | <u>\$ 2,240,000</u> |
| <b>Total assets</b>                          | <u>\$ 4,294,500</u> | <u>\$ 3,183,250</u> |
| <b>LIABILITIES</b>                           |                     |                     |
| <b>Current liabilities</b>                   |                     |                     |
| Accounts payable                             | \$ 196,000          | \$ 208,250          |
| Interest payable                             | 3,500               | –                   |
| <b>Total current liabilities</b>             | <u>\$ 199,500</u>   | <u>\$ 208,250</u>   |
| <b>Long-term liabilities</b>                 |                     |                     |
| Long-term note payable                       | 140,000             | –                   |
| <b>Total liabilities</b>                     | <u>\$ 339,500</u>   | <u>\$ 208,250</u>   |
| <b>STOCKHOLDERS' EQUITY</b>                  |                     |                     |
| Common stock (\$1 par)                       | \$ 1,225,000        | \$ 1,050,000        |
| Paid-in capital in excess of par             | 1,400,000           | 700,000             |
| Retained earnings                            | 1,330,000           | 1,225,000           |
| <b>Total stockholders' equity</b>            | <u>\$ 3,955,000</u> | <u>\$ 2,975,000</u> |
| <b>Total Liabilities and equity</b>          | <u>\$ 4,294,500</u> | <u>\$ 3,183,250</u> |

Additional information about transactions and events occurring in 20X9 follows:

Dividends of \$96,250 were declared and paid.

Accounts payable and accounts receivable relate solely to purchases and sales of inventory. Prepaid items related only to advertising expenses.

The decrease in land resulted from the sale of a parcel at a \$78,750 gain. No land was purchased during the year. Equipment was purchased during the year in exchange for a promissory note payable. No equipment was sold.

The increase in paid-in capital resulted from issuing additional shares for cash.

The income statement for the year ending December 31, 20X9, included the following key amounts:

|                     |              |
|---------------------|--------------|
| Sales               | \$ 3,500,000 |
| Cost of goods sold  | 2,100,000    |
| Salaries expense    | 700,000      |
| Advertising expense | 262,500      |

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## Solution 8

| <b>CUTLER DESIGN CORPORATION</b>                 |            |                            |
|--|------------|----------------------------|
| <b>Statement of Cash Flows</b>                   |            |                            |
| <b>For the year ending December 31, 20X9</b>     |            |                            |
| <b>Cash flows from operating activities:</b>     |            |                            |
| Net income                                       |            | \$ 201,250                 |
| Add (deduct) noncash effects on operating income |            |                            |
| Depreciation expense                             | \$ 52,500  |                            |
| Gain on sale of equipment                        | (78,750)   |                            |
| Increase in accounts receivable                  | (52,500)   |                            |
| Decrease in inventory                            | 17,500     |                            |
| Increase in prepaid expenses                     | (17,500)   |                            |
| Decrease in accounts payable                     | (12,250)   |                            |
| Increase in interest payable                     | 3,500      | (87,500)                   |
| Net cash provided by operating activities        |            | \$ 113,750                 |
| <b>Cash flows from investing activities:</b>     |            |                            |
| Sale of land                                     | \$ 253,750 |                            |
| Net cash provided by investing activities        |            | 253,750                    |
| <b>Cash flows from financing activities:</b>     |            |                            |
| Proceeds from issuing stock                      | \$ 875,000 |                            |
| Dividends on common                              | (96,250)   |                            |
| Net cash provided by financing activities        |            | 778,750                    |
| <b>Net increase in cash</b>                      |            | <b>\$ 1,146,250</b>        |
| <b>Cash balance at January 1, 20X9</b>           |            | <b>15,750</b>              |
| <b>Cash balance at December 31, 20X9</b>         |            | <b><u>\$ 1,162,000</u></b> |
| <b>Noncash investing/financing activities:</b>   |            |                            |
| Issued note payable for equipment                |            | <u>\$ 140,000</u>          |
| <b>Supplemental information:</b>                 |            |                            |
| Cash paid for interest                           |            | \$ 5,250                   |
| Cash paid for taxes                              |            | 70,000                     |