

## Chapter 17 Problem-Solving Assignment Example Practice Problem

**Problem 17-2B**

Ratios, common-size statements, and trend percents

P1 P2 P3 

Selected comparative financial statement information of Bluegrass Corporation follows.

BLUEGRASS CORPORATION			
Comparative Income Statements			
For Years Ended December 31, 2015, 2014, and 2013			
	2015	2014	2013
Sales .....	\$198,800	\$166,000	\$143,800
Cost of goods sold .....	<u>108,890</u>	<u>86,175</u>	<u>66,200</u>
Gross profit .....	89,910	79,825	77,600
Selling expenses .....	22,680	19,790	18,000
Administrative expenses .....	<u>16,760</u>	<u>14,610</u>	<u>15,700</u>
Total expenses .....	<u>39,440</u>	<u>34,400</u>	<u>33,700</u>
Income before taxes .....	50,470	45,425	43,900
Income taxes .....	<u>6,050</u>	<u>5,910</u>	<u>5,300</u>
Net income .....	<u>\$ 44,420</u>	<u>\$ 39,515</u>	<u>\$ 38,600</u>

BLUEGRASS CORPORATION			
Comparative Balance Sheets			
December 31, 2015, 2014, and 2013			
	2015	2014	2013
<b>Assets</b>			
Current assets .....	\$ 54,860	\$ 32,660	\$ 36,300
Long-term investments .....	0	1,700	10,600
Plant assets, net .....	<u>112,810</u>	<u>113,660</u>	<u>79,000</u>
Total assets .....	<u>\$167,670</u>	<u>\$148,020</u>	<u>\$125,900</u>
<b>Liabilities and Equity</b>			
Current liabilities .....	\$ 22,370	\$ 19,180	\$ 16,500
Common stock .....	46,500	46,500	37,000
Other paid-in capital .....	13,850	13,850	11,300
Retained earnings .....	<u>84,950</u>	<u>68,490</u>	<u>61,100</u>
Total liabilities and equity .....	<u>\$167,670</u>	<u>\$148,020</u>	<u>\$125,900</u>

**Required**

1. Compute each year's current ratio. (Round ratio amounts to one decimal.)
2. Express the income statement data in common-size percents. (Round percents to two decimals.)
3. Express the balance sheet data in trend percents with 2013 as the base year. (Round percents to two decimals.)

**Check** (3) 2015, Total assets trend, 133.18%

**Analysis Component**

4. Comment on any significant relations revealed by the ratios and percents computed.

**Problem 17-3B**

Transactions, working capital, and liquidity ratios. P3

**Check** June 3:  
Current ratio, 2.88;  
Acid-test ratio, 2.40

June 30: Working capital, \$(10,000); Current ratio, 0.97

Koto Corporation began the month of June with \$300,000 of current assets, a current ratio of 2.58, and an acid-test ratio of 1.4:1. During the month, it completed the following transactions (the company uses a perpetual inventory system).

- |      |    |  |
|------|----|--|
| June | 1  | Sold merchandise inventory that cost \$75,000 for \$120,000 cash.                        |
|      | 3  | Collected \$88,000 cash on an account receivable.  |
|      | 5  | Purchased \$160,000 of merchandise inventory on credit.                                  |
|      | 7  | Borrowed \$100,000 cash by giving the bank a 60-day, 10% note.                           |
|      | 10 | Borrowed \$120,000 cash by signing a long-term secured note.                             |
|      | 12 | Purchased machinery for \$275,000 cash.  |
|      | 15 | Declared a \$1 per share cash dividend on its 80,000 shares of outstanding common stock. |
|      | 19 | Wrote off a \$5,000 bad debt against the Allowance for Doubtful Accounts account.        |
|      | 22 | Paid \$12,000 cash to settle an account payable.   |
|      | 30 | Paid the dividend declared on June 15.   |

**Required**

Prepare a table showing the company's (1) current ratio, (2) acid-test ratio, and (3) working capital for each transaction. Round ratios to two decimals.

# Solution

## Problem 17-2B (60 minutes)

### Part 1

Current ratio:      December 31, 2015:  $\$54,860 / \$22,370 = \underline{\underline{2.5 \text{ to } 1}}$   
                           December 31, 2014:  $\$32,660 / \$19,180 = \underline{\underline{1.7 \text{ to } 1}}$   
                           December 31, 2013:  $\$36,300 / \$16,500 = \underline{\underline{2.2 \text{ to } 1}}$

### Part 2

<b>BLUEGRASS CORPORATION</b> <b>Common-Size Comparative Income Statements</b> <b>For Years Ended December 31, 2015, 2014, and 2013</b>			
	2015	2014	2013
Sales.....	100.00%	100.00%	100.00%
Cost of goods sold.....	<u>54.77</u>	<u>51.91</u>	<u>46.04</u>
Gross profit.....	45.23	48.09	53.96
Selling expenses.....	11.41	11.92	12.52
Administrative expenses.....	<u>8.43</u>	<u>8.80</u>	<u>10.92</u>
Total expenses.....	<u>19.84</u>	<u>20.72</u>	<u>23.44</u>
Income before taxes.....	25.39	27.36	30.53
Income taxes.....	<u>3.04</u>	<u>3.56</u>	<u>3.69</u>
Net income.....	<u>22.34%</u>	<u>23.80%</u>	<u>26.84%</u>

\* Some totals do not reconcile due to rounding.

**Problem 17-2B (Concluded)****Part 3**

<b>BLUEGRASS CORPORATION</b>			
<b>Balance Sheet Data in Trend Percents</b>			
<b>December 31, 2015, 2014, and 2013</b>			
	2015	2014	2013
<b>Assets</b>			
Current assets.....	151.13%	89.97%	100.00%
Long-term investments.....	0.00	16.04	100.00
Plant assets.....	142.80	143.87	100.00
Total assets.....	133.18	117.57	100.00
<b>Liabilities and Equity</b>			
Current liabilities.....	135.58%	116.24%	100.00%
Common stock.....	125.68	125.68	100.00
Other paid in capital.....	122.57	122.57	100.00
Retained earnings.....	139.03	112.09	100.00
Total liabilities and equity.....	133.18	117.57	100.00

**Part 4****Significant relations revealed**

Bluegrass's cost of goods sold took a larger percent of sales each year. Selling and administrative expenses and income taxes took a somewhat smaller portion each year, but not enough to offset the effect of cost of goods sold. As a result, income became a smaller percent of sales each year.

The large expansion of plant assets in 2014 was financed by a reduction in current assets, an increase in current liabilities, a large reduction in long-term investments, and apparently by a stock sale. One effect of this plan was to reduce the current ratio. However, the current ratio recovered in 2015. This apparently resulted from profits, limiting the amount of dividends paid, and the liquidation of long-term investments.