TUTORIAL 4 Solution

1. Madison Company : For year(1999)

a. Current ratio:

$$\frac{\text{Current assets, } \$490{,}000}{\text{Current liabilities, } \$200{,}000} = 2.45 \text{ to } 1$$

b. Acid-test ratio:

$$\frac{\text{Quick assets, } \$181{,}000}{\text{Current liabilities, } \$200{,}000} = 0.91 \text{ to } 1 \text{ (rounded)}$$

c. Accounts receivable turnover:

$$\frac{\text{Sales, } \$2{,}100{,}000}{\text{Average accounts receivable, } \$150{,}000} = 14 \text{ times}$$

$$\frac{365 \text{ days}}{14 \text{ times}} = 26.1 \text{ days (rounded)}$$

d. Inventory turnover:

$$\frac{\text{Cost of goods sold, } \$1{,}260{,}000}{\text{Average inventory, } \$280{,}000} = 4.5 \text{ times}$$

$$\frac{365 \text{ days}}{4.5 \text{ times}} = 81.1 \text{ days to turn (rounded)}$$

e. Times interest earned:

$$\frac{\text{Earnings before interest and income taxes, } \$180{,}000}{\text{Interest expense, } \$30{,}000} = 6.0 \text{ times}$$

f. Earnings per share:

$$\frac{\text{Net income to common stock, } \$105{,}000}{\text{Common shares outstanding, } 20{,}000} = \$5.25\text{/share}$$

g. Price-earnings ratio:

$$\frac{\text{Market price per share, } \$63.00}{\text{Earnings per share, } \$5.25} = 12.0$$

h. Return on total assets:

$$= \frac{\text{Net income}}{\text{Average assets}} = \frac{\$105{,}000}{[\$1{,}100{,}000 + \$1{,}300{,}000\,]\,/\,2}$$

$$= \frac{\$105{,}000}{\$1{,}200{,}000} = 8.75\%$$

2. Georgette Company: For year (1999)

a. Current Ratio:

$$= \frac{\text{Current Assets, (Cash + Receivables + Inventories)}}{\text{Current Liabilities (Accounts payable)}}$$

$$= \frac{\$(20{,}000 + 65{,}000 + 60{,}000)}{\$(50{,}000)}$$

= 2.9:1

b. Acid Test ratio

$$= \frac{\text{Cash + Receivables}}{\text{Current liabilities}} = \frac{\$20{,}000 + \$65{,}000}{\$50{,}000}$$

= 1.7:1

c. Receivable turnover

$$= \frac{\text{Net credit sales}}{\text{(Beginning receivables + Ending inventories) / 2}}$$

$$= \frac{\$400{,}000}{[65{,}000 + 60{,}000\,]\,/\,2} = \frac{\$400{,}000}{\$62{,}500} = 6.4 \text{ times}$$

d. Inventory turnover

$$= \frac{\text{Cost of goods sold}}{\text{(Beginning inventories + Ending inventories) / 2}}$$

$$= \frac{\$198{,}000}{[50{,}000 + 60{,}000\,]\,/\,2} = \frac{\$198{,}000}{\$55{,}000}$$

= 3.6 times

3. Meng Products Company: For year (2000)

a. Profit margin $= \frac{\text{Net income}}{\text{Net sales}} = \frac{\$64,000}{\$800,000}$

= 8%

b. Asset turnover $= \frac{\text{Net sales}}{(\text{Beginning assets} + \text{ending assets}) / 2}$

$= \frac{\$800,000}{\$[500,000 + 600,000\ ] / 2}$ = 1.5 times

c. Return on assets $= \frac{\text{Net income}}{\text{Average assets}}$

$= \frac{\$64,000}{\$550,000}$ = 11.6%

4. Dorothy Fleming Company : For year (1999)

a. Earnings per share $= \frac{\text{Net income}}{\text{Number of shares of common stock outstanding}}$

Number of common stock outstanding at 31/12/99

= Beginning shares ($300,000/ 5) 60,000 - resale 4,000 shares (OR) ($280,000/5)

= 5,600 shares

EPS = $\frac{\$202,300}{56,000}$ = $3.6125 / share

b. Current ratio

$= \frac{\text{Current Assets, } \$344,900}{\text{Current Liabilities } \$193,500}$ = 1.8:1

c. Acid test ratio $= \frac{\text{Cash + Marketable securities + Inventories}}{\text{Current liabilities}}$

$= \frac{\$60,100 + 54,000 + 107,800}{\$193,500} = \frac{\$221,900}{\$193,500}$ = 1.1:1

d. Receivables turnover = $\dfrac{\text{Net credit sales}}{\text{(Beginning receivables + Ending receivables) / 2}}$

$= \dfrac{\$1{,}818{,}500}{[\$102{,}800 + \$107{,}800\,]\,/\,2} = \dfrac{\$1{,}818{,}500}{\$105{,}300} = 17.3 \text{ times}$

e. Inventory turnover = $\dfrac{\text{Cost of goods sold}}{\text{(Beginning inventories + Ending inventories) / 2}}$

$= \dfrac{\$1{,}005{,}500}{[\$115{,}500 + \$123{,}000\,]\,/2} = \dfrac{\$1{,}005{,}500}{\$119{,}250} = 8.4 \text{ times}$

f. Times interest earned = $\dfrac{\text{Income before Income tax and interest expense}}{\text{Interest expense}}$

$= \dfrac{\text{Income from operations } \$307{,}000}{\$18{,}000} = 17.1 \text{ times}$

g. Asset turnover = $\dfrac{\text{Net sales}}{\text{Average assets}}$

$= \dfrac{\$1{,}818{,}500}{[\$852{,}800 + \$970{,}200\,]\,/2} = \dfrac{\$1{,}818{,}500}{\$911{,}500}$

$= 2.0 \text{ times}$

h. Debt to total assets = $\dfrac{\text{Total debt (liabilities)}}{\text{Total assets}} = \dfrac{\$403{,}500}{\$970{,}200} = 41.6\%$

i. Return on assets = $\dfrac{\text{Net income}}{\text{Average assets}}$

$= \dfrac{\$202{,}300}{\$[852{,}800 + \$970{,}200\,]\,/\,2} = \dfrac{\$202{,}300}{\$911{,}500} = 22.19\%$

6.(i)

Auto Vista Glass Sdn Bhd
Common-size Income Statement
For the Year Ended 31 December, 19x6

	(RM,000) Auto Glass	Auto %	Industry %
Net sales	781	100	100
Cost of goods sold	497	63.63	65.8
Gross profit	284	36.37	34.2
Operating expenses	163	20.89	19.7
Operating income	121	15.5	14.5
Other expenses	5	0.6	0.4
Net income	116	14.9	14.1

Auto Vista Glass Sdn Bhd
Common-size Balance Sheet
31 December, 19x6

	(RM,000) Auto Vista	Auto %	Industry %
Current assets	350	77.78	70.9
Fixed assets	74	16.44	23.6
Intangible assets	4	0.89	0.8
Other assets	22	4.88	4.7
Total assets	450	100	100
Current liabilities	207	46	48.1
Long-term liabilities	62	13.78	16.6
Stockholder's equity	181	40.22	35.3
Total	450	100	100

(ii). Yes, Auto Vista's performance is better than the industry average.

(iii). Yes, Auto Vista's financial position is better than the industry average.

6. Segar Sdn Bhd and Bersih Sdn Bhd

a. Current ratio

	Segar Sdn Bhd	Bersih Sdn Bhd
= Current Assets / Current Liabilities		
	= $186,000/ 98,000	= $173,000/ 108,000
	= 1.897:1	= 1.602:1

b. Acid test ratio = Cash + Receivables / Current liabilities

	Segar Sdn Bhd	Bersih Sdn Bhd
	= $19,000 + 46,000 / $98,000	= $22,000 + 42,000 / $108,000
	= 0.48:1	= 0.59:1

c. Inventory turnover = Cost of goods sold / (Beginning inventories + Ending inventories) / 2

	Segar Sdn Bhd	Bersih Sdn Bhd
	= $258,000 / $(88,000 + 100,000) /2	= $209,000 / $(93,000 + 87,000)/2
	= 2.745 times	= 2.3 times

d. Receivables turnover = Net credit sales / (Beginning receivables + Ending receivables) / 2

	Segar Sdn Bhd	Bersih Sdn Bhd
	= $497,000 / $(48,000 + 46,000) / 2	= $371,000 / $(40,000 + 42,000) /2
	= 10.57 times	= 9.049 times

Day's sales in average receivables

	Segar Sdn Bhd	Bersih Sdn Bhd
	= 360 days/10.57	=360 days/0.049
	= 34 days	= 40 days

e. Debt to total assets = Total debt (liabilities) / Total assets

	Segar Sdn Bhd	Bersih Sdn Bhd
	= $98,000/ $328,000	= $108,000/ $265,000
	= 29.88%	= 40.75%

f. Times interest earned = $\dfrac{\text{Income before Income tax and interest expense}}{\text{Interest expense}}$

$= \dfrac{\text{Net income + Interest expense}}{\text{Interest expense}}$

$= \dfrac{\$72,000 + \$19,000}{\$19,000}$

g. Asset turnover = $\dfrac{\text{Net sales}}{\text{Average assets}}$

$= \dfrac{\$497,000}{(270,000 + 328,000)/ 2}$

$= \dfrac{\$371,000}{(259,000 + 265,000)/ 2}$

$= \dfrac{\$497,000}{\$299,000}$	$= \dfrac{\$371,000}{\$262,000}$
= 166.2 %	= 141.6%

h. Return on assets = $\dfrac{\text{Net income}}{\text{Average assets}}$

= \$72,000/ \$299,000	= \$48,000/ \$262,000
= 24.08%	= 18.32%

i. Earnings per share = $\dfrac{\text{Net income}}{\text{Number of shares of common stock outstanding}}$

Number of common stock outstanding at the end of period

= 5,000 shares	=10,000 shares
= \$72,000/ 5,000	= 48,000 / 10,000
= \$14.4/share	= \$4.8/share

j. Price earnings ratio = $\dfrac{\text{Market price per share of stock}}{\text{Earnings per share}}$

= \$112/ 14.4	=\$51/ 4.8
= 7.78:1	= 10.62:1