Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please answer the following ratio analysis questions. Reference pages 207-212 in your book if help is needed.

**Profitability Ratios**

**GPM= Gross Profit/Sales Revenue X 100**

 **NPM = Net Profit Before Interest and Tax/Sales Revenue X 100**

1. Suppose a business has sales revenue of $350 million and gross profit of $150 million. Calculate. Calculate its GPM, using the GPM formula.

43%

* 1. Justify your answer. What does it mean to have their percentage?

This is interpreted to mean that every $100 of sales the business makes $43 in gross profit. That $43 dollars goes toward payments of FIXED expenses. Businesses aim for a high GPM.

1. A business that grows strawberries has sales revenue of $500 million. Their gross profit is $250 million. Please calculate its GPM, using the GPM formula.

50%

* 1. Justify your answer. What does it mean to have their percentage?

This is interpreted to mean that every $100 of sales the business makes $50. That $50 dollars goes toward payments of FIXED expenses. Businesses aim for a high GPM

1. How can a business improve their Gross Profit Margin?
	1. Increase prices
	2. Source cheaper suppliers of materials
	3. Adopt a more aggressive promotional strategy
	4. Aim to reduce labour costs.
2. A firm has sales revenue of $200 million and a net profit before and tax $85 million. Calculate its NPM.

43%

* 1. Justify your answer. What does it mean to have their percentage?

The firm therefore makes and NPM of $43 for every $100 dollars in sales revenue. This is after all fixed expenses have been paid for. A low NPM indicates a business is having a hard time controlling their costs.

1. How can business improve their Net Profit Margin?
	1. Lower indirect costs
	2. Negotiate with key stakeholders

**LIQUIDIY RATIOS**

**Current Ratio = current assets/current liabilities**

**Acid Test Ratio = current assets – stock/current liabilities**

1. A business has current assets totaling $1,000,000 while its current liabilities amount to $500,000. What is their current ratio?

2

1. What does it mean to have a current ratio above 2?

For every $1 dollar of current liabilities the firm has $2 of current assets. A current ratio of 1 and below means that current assets are less than liabilities. A business might not be able to pay off their short term debt with their current assets. This is not a good financial position to be in. Remember assets can be turned into cash and liabilities are debts and payables.

1. What are some possible strategies to improve current ratio?
	1. Seek long-term loans
	2. Sell existing long-term assets for cash to cover payables
2. Suppose in the example above the business has stock worth $150,000. What is its acid test ratio?

1.7

* 1. Justify your answer. What does the above answer mean for the business?

For every $1 dollar of current liabilities the business has $1.70 in assets less stock. By removing stock the business gets rid of the least liquid of current assets. An Acid test ratio of 1 means an inability to pay short term debt. Not a healthy financial position.

Please answer the following questions about Investment Appraisal. Reference pages 233-235 in your book if help is needed.

**Investment Appraisal**

**Payback = Initial Investment Cost/Annual Cash Flow From Investment**

**Extra Cash Inflow Required/Annual Cash flow in last year X 12**

**Average Rate of Return = Total returns - Capital Cost**

 **Years of Usage\_\_\_\_\_\_\_\_\_\_\_ X 100**

 **Capital Cost**

1. A construction engineer plans on investing $300,000 in a new cement - mixing machine and estimates that it will generate about $75,000 in annual cash flow. Calculate the payback period for the machine.

4 years.

1. Another construction engineer aims to invest $400,000 in a new timber-cutting machine is expected to generate the following cash flows in the first years: $70,000, $100,000, $120,000, $200,000. Its payback period can be identified by calculating the cumulative cash flow.

|  |  |  |
| --- | --- | --- |
| Year | Annual Net Cash Flows $ | Cumulative Cash Flows $ |
| 0 | $400,000 |  ($400,000) |
| 1 | 70,000 | (330,000) |
| 2 | 100,000 | (230,000) |
| 3 | 120,000 | (110,000) |
| 4 | 200,000 | 90,000 |

 After buying the new piece of equipment, the business will be able to make a positive cash flow after 5 months of that fourth year.

90,000/200,000 X 12 = 5 months

 3.) A business considers purchasing a new commercial photocopier at a cost $160,000. It expects the following revenue streams for the next five years; $31,000, $52,000, $76,000, $91,000 and $102,000. Calculate its ARR.

 44%

4.) What are the advantages of the ARR?

1. Shows profitability of an investment
2. Makes use of all cash flows
3. Allows for easy comparison of investments