Quantitative skills
Ratios

gross profit margin

Method

To calculate gross profit margin, two figures from the income statement are needed: sales revenue and gross profit.

The formula for calculating the gross profit margin is:

$$\frac{\text{Gross Profit}}{\text{Sales Revenue}} \times 100$$

The answer is given as a percentage.

For example,

If sales revenue for a company is £120 000 and gross profit is £50 000, then the gross profit margin is

$$\frac{£50\,000}{£120\,000} \times 100 = 41.67\% \text{ (2.d.p.)}$$

Example 1

Sales Revenue	£50 000
Cost of Sales	£30 000
Gross Profit	£20 000
Expenses	£15 000
Net Profit	£5 000

Use the information above to calculate gross profit margin. Include the appropriate units in your answer

Answer:

Quantitative skills
Ratios

Example 2

Sales Revenue	£125 000
Cost of Sales	£72 000
Gross Profit	£53 000
Expenses	£41,000
Net Profit	£12 000

Use the information above to calculate gross profit margin. Include the appropriate units in your answer. Give your answer to 1.d.p.

Answer:

Quantitative skills
Ratios

Net Profit Margin

Method

To calculate net profit margin, two figures from the income statement are needed: sales revenue and net profit.

The formula for calculating the net profit margin is:

$$\frac{\text{Net Profit}}{\text{Sales Revenue}} \times 100$$

The answer is given as a percentage.

For example,

If sales revenue for a business is £170 000 and net profit is £32 000, then the net profit margin is

$$\frac{£32\,000}{£170\,000} \times 100 = 18.82\% \text{ (2.d.p.)}$$

Example 3

Sales Revenue	£50 000
Cost of Sales	£30 000
Gross profit	£20 000
Expenses	£15 000
Net Profit	£5 000

Use the information above to calculate net profit margin. Include the appropriate units in your answer

Answer:

Quantitative skills
Ratios

Example 4

Sales Revenue	£175 000
Cost of Sales	£96 000
Gross profit	£79 000
Expenses	£59 000
Net Profit	£20 000

Use the information above to calculate net profit margin. Include the appropriate units in your answer. Give your answer to 2.d.p.

Answer:

Quantitative skills
Ratios

Return on Capital Employed (long term liabilities + shareholders' capital)

Method

To calculate return on capital employed (ROCE), the following information is needed: net profit (from the income statement) and capital employed (from the balance sheet). Capital employed may need to be calculated from information within the balance sheet, depending on how the balance sheet is constructed. If the figure for capital employed is not given, then it can be calculated by adding long term liabilities to shareholders' funds. Shareholders' funds is the sum of share capital and reserves, as shown below:

Fixed Assets	£100 000
Current Assets	£55 000
Current Liabilities	£25 000
Long term Liabilities	£20 000
Net Assets	£110 000
Share Capital	£75 000
Reserves	£35 000
Shareholders' Funds	£110 000

Shareholders' funds = £75 000 + £35 000 = £110 000

Capital employed = long term liabilities + shareholders' funds.
In the example above, capital employed is £130 000 (£20 000 + £110 000)

The formula for calculating ROCE is:

$$\frac{\text{Net Profit}}{\text{Capital Employed}} \times 100$$

The answer is given as a percentage.

For example,

If net profit for a business is £15 000, the shareholders' funds are £110 000 and long term liabilities are £20 000, then the return on capital employed is:

$$\frac{£15\,000}{£130\,000} \times 100 = 11.54\% \text{ (2.d.p.)}$$

Quantitative skills
Ratios

Example 5

Sales Revenue	£175 000
Cost of Sales	£96 000
Gross Profit	£79 000
Expenses	£59 000
Net Profit	£20 000

Fixed Assets	£80 000
Current Assets	£37 000
Current Liabilities	£15 000
Long term Liabilities	£22 000
Net Assets	£80 000
Share Capital	£60 000
Reserves	£20 000
Shareholders' Funds	£80 000

Use the information above to calculate ROCE. Include the appropriate units in your answer. Give your answer to 2.d.p.

Answer:

Quantitative skills
Ratios

Example 6

Sales Revenue	£127 000
Cost of Sales	£53 500
Gross Profit	£73 500
Expenses	£57 200
Net Profit	£16 300

Fixed Assets	£96 000
Current Assets	£42 000
Current Liabilities	£28 000
Long term Liabilities	£15 000
Net Assets	£95 000
Share Capital	£80 000
Reserves	£15 000
Shareholders' Funds	£95 000

Use the information above to calculate ROCE. Include the appropriate units in your answer. Give your answer to 2.d.p.

Answer:

Quantitative skills
Ratios

Current Ratio

Method

To calculate current ratio, two figures are needed from the balance sheet: total current assets and total current labilities. The total for current assets and current liabilities can be calculated by adding up the individual items for each of these headings, if the total is not already given. In the table below, the total current liabilities are given as £28 000 and the total current assets figure is obtained by adding up the figures for stock (£15 000), debtors (£10 000) and cash (£17 000). Therefore, the figure for total current assets is £42 000.

Fixed Assets	£96 000
Current Assets:	
Stock	£15 000
Debtors	£10 000
Cash	£17 000
Current Liabilities	£28 000
Long term Liabilities	£15 000
Net Assets	£95 000
Share Capital	£80 000
Reserves	£15 000
Shareholders' Funds	£95 000

The formula for calculating the current ratio is:

$$\frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

The answer is given in the form X : 1, where X is the result of the above formula. Therefore, expressed in this form, the answer shows the proportion of current assets a business has in relation to their liabilities.

For example, using the information above:

$$\frac{£42\,000}{£28\,000} = 1.5 : 1$$

This means that the business has 1.5 times as many current assets in proportion to its current liabilities (or put another way, it has £1.50 current assets to every £1 of current liabilities).

Quantitative skills
Ratios

Example 7

Fixed Assets	£115 500
Current Assets	
Stock	£5 000
Debtors	£3 500
Cash	£4 700
Current Liabilities	£18 500
Long term Liabilities	£40 000
Net Assets	£70 200
Share Capital	£55 200
Reserves	£15 000
Shareholders' Funds	£70 200

Use the information above to calculate the current ratio. Express your answer in the form X : 1, where X is given to 2.d.p.

Answer:

Quantitative skills
Ratios

Example 8

Fixed Assets	£93 700
Current Assets	£68 500
Current Liabilities	
Creditors	£45 000
Other	£3 000
Long term Liabilities	£35 000
Net Assets	£79 200
Share Capital	£60 000
Reserves	£19 200
Shareholders' Funds	£79 200

Use the information above to calculate the current ratio. Express your answer in the form X : 1, where X is given to 2.d.p.

Answer:

Quantitative skills
Ratios

Acid Test Ratio

Method

To calculate acid test ratio, information is needed from the balance sheet. This calculation is similar to the current ratio, with a difference: Stock is deducted from total current assets, before dividing it by total current liabilities.

Fixed Assets	£96 000
Current Assets	
Stock	£15 000
Debtors	£10 000
Cash	£17 000
Current Liabilities	£28 000
Long term Liabilities	£15 000
Net Assets	£95 000
Share Capital	£80 000
Reserves	£15 000
Shareholders' Funds	£95 000

The formula for calculating the acid current ratio is:

$$\frac{\text{Total Current Assets - Stock}}{\text{Total Current Liabilities}}$$

The answer is given in the form X : 1, where X is the result of the above formula. Therefore, expressed in this form, the answer shows the proportion of current assets a business has (exclusive of stock) in relation to their liabilities.

For example, using the information above:

$$\frac{\text{£10 000 + £17 000}}{\text{£28 000}} = \text{0.96 : 1}$$

This means that the business has 0.96 times as many current assets (exclusive of stock) in proportion to its current liabilities (or put another way, it has £0.96 current assets excluding stock to every £1 of current liabilities).

Quantitative skills
Ratios

Example 9

Fixed Assets	£115 500
Current Assets	
Stock	£5 000
Debtors	£3 500
Cash	£4 700
Current Liabilities	£18 500
Long term Liabilities	£40 000
Net Assets	£70 200
Share Capital	£55 200
Reserves	£15 000
Shareholders' Funds	£70 200

Use the information above to calculate the current ratio. express your answer in the form X : 1, where X is given to 2.d.p.

Answer:

Quantitative skills
Ratios

Example 10

Fixed Assets	£93 700
Total Current Assets	£68 500
of which is Stock	£38 000
Total Current Liabilities	£22 000
Long term Liabilities	£35 000
Net Assets	£105 200
Share Capital	£60 000
Reserves	£45 200
Shareholders' Funds	£105 200

Use the information above to calculate the current ratio. Express your answer in the form X : 1, where X is given to 2.d.p.

Answer:

Quantitative skills
Ratios

Gearing (long term liabilities + shareholders' funds)

Method

To calculate gearing, the following information is needed from the balance sheet: long term liabilities and capital employed (remember capital employed is long term liabilities plus shareholders' funds).

Fixed Assets	£100 000
Current Assets	£55 000
Current Liabilities	£25 000
Long term Liabilities	£20 000
Net Assets	£110 000
Share Capital	£75 000
Reserves	£35 000
Shareholders' Funds	£110 000

Shareholders' funds = £75 000 + £35 000 = £110 000

Capital employed = long term liabilities + shareholders' funds.
In the example above capital employed is £130 000 (£20 000 + £110 000)

The formula for calculating gearing is:

$$\frac{\text{Long term liabilities}}{\text{Capital Employed}} \times 100$$

The answer is given as a percentage.

For example,

If long term liabilities are £20 000 and shareholders' funds are £110 000, then gearing is:

$$\frac{£20\,000}{(£20\,000 + £110\,000)} \times 100 = 15.38\% \text{ (2.d.p.)}$$

Quantitative skills
Ratios

Example 11

Fixed Assets	£80 000
Current Assets	£37 000
Current Liabilities	£15 000
Long term Liabilities	£22 000
Net Assets	£80 000
Share Capital	£60 000
Reserves	£20 000
Shareholders' Funds	£80 000

Use the information above to calculate gearing. Include the appropriate units in your answer. Give your answer to 2.d.p.

Answer:

Quantitative skills
Ratios

Example 12

Fixed Assets	£96 000
Current Assets	£42 000
Current Liabilities	£28 000
Long term Liabilities	£15 000
Net Assets	£95 000
Share Capital	£80 000
Reserves	£15 000
Shareholders' Funds	£95 000

Use the information above to calculate gearing. Include the appropriate units in your answer. Give your answer to 2.d.p.

Answer:

Quantitative skills
Ratios

Answers

Example 1

Accepted answers: 40%

Example 2

Accepted answers: 42.4%

Example 3

Accepted answers: 10%

Example 4

Accepted answers: 11.43%

Example 5

Accepted answers: 19.61%

Example 6

Accepted answers: 14.82%

Example 7

Accepted answers: 0.71 : 1
(allow with or without spaces on either side of colon)

Example 8

Accepted answers: 1.43 : 1
(allow with or without spaces on either side of colon)

Example 9

Accepted answers: 0.44 : 1
(allow with or without spaces on either side of colon)

Example 10

Accepted answers: 1.39 : 1
(allow with or without spaces on either side of colon)

Example 11

Accepted answers: 21.57%

Example 12

Accepted answers: 13.63%