Activity 8.1

1. Percentage **gross profit on sales/turnover** $= \frac{\text{Gross profit}}{\text{Sales}} \times \frac{100}{1}$

2019	2018
$\frac{388\,854}{665\,034} \times \frac{100}{1}$	$\frac{400\,200}{667\,034} \times \frac{100}{1}$
$= 58{,}5\%$	$= 60\%$

2. Percentage **profit mark-up on cost** $= \frac{\text{Gross profit}}{\text{Cost of sales}} \times \frac{100}{1}$

2019	2018
$\frac{388\,854}{276\,180} \times \frac{100}{1}$	$\frac{400\,200}{266\,800} \times \frac{100}{1}$
$= 140{,}8\%$	$= 150\%$

3.
- The percentage gross profit on sales decreased from 60% in 2018 to 58,5% in 2019.
- The percentage gross profit on cost of sales decreased from 150% in 2018 to 140,8% in 2019.
- Both ratios thus indicate that in 2019 the business operated below the profit margin of the previous year.
- The reasons could be one of the following and the business should investigate this:
  - Regular sales at discount prices took place to increase the rate of stock turnover or because of competitors in the market.
  - Cost of sales could have increased due to an increase in prices from suppliers.
  - Mistakes could have been made in calculating prices, on source documents or in the journals.
  - In the case of the periodic inventory system it can be due to normal stock losses, such as theft or damage.

4. Percentage **net profit on sales** $= \frac{\text{Net profit}}{\text{Sales}} \times \frac{100}{1}$

2019	2018
$\frac{168\,640}{665\,034} \times \frac{100}{1}$	$\frac{153\,418}{667\,034} \times \frac{100}{1}$
$= 25{,}4\%$	$= 23\%$

5. Percentage **operating expenses on sales** $= \frac{\text{Operating expenses}}{\text{Sales}} \times \frac{100}{1}$

2019	2018
$\frac{214\,244}{665\,034} \times \frac{100}{1}$	$\frac{238\,782}{667\,034} \times \frac{100}{1}$
$= 32{,}2\%$	$= 35{,}8\%$

6. Percentage operating profit on sales $= \frac{\text{Operating profit}}{\text{Sales}} \times \frac{100}{1}$

2019	**2018**
$\frac{195\ 610}{665\ 034} \times \frac{100}{1}$	$\frac{181\ 418}{667\ 034} \times \frac{100}{1}$
= 25,4%	= 23%

7.
- The percentage net profit on sales increased from 23% in 2018 to 25,4% in 2019.
- The percentage operating profit on sales increased from 27,2% in 2018 to 29,4% in 2019.
- An increase in both these ratios is positive – it indicates that the business operated more efficient in 2019.
- The percentage operating expenses on sales decreased slightly from 35,8% in 2018 to 32,2% in 2019.
- This is good. It indicates that the business had better control over expenses and was more productive.
- The business will investigate if they can reduce expenses further in the future.
- Good planning and staying within the budget can improve these figures further.

8. Current ratio = Current assets : Current liabilities

2019	**2018**
101 537 : 75 745	60 536 : 60 424
= 1,3 : 1	= 1 : 1

9. Acid test ratio = (Current assets – Stock) : Current liabilities or
= (Trade and other receivables + Cash and cash equivalents) : Current liabilities

	2019	**2018**
	(101 537 – 55 710) : 75 745	(60 536 – 28 252) : 60 424
Or	(44 577 + 1 250) : 75 745	(26 650 + 5 634) : 60 424
	= 45 827 : 75 745	= 32 284 : 60 424
	= 0,6 : 1	= 0,5 : 1

10.
- The current ratio improved from 1 : 1 in 2018 to 1,3 : 1 in 2019.
- It is relatively low and the business should try to improve it further, so that there are at least TWO assets for every ONE liability.
- The acid test ratio improved from 0,5 : 1 in 2018 to 0,6 : 1 in 2019.
- Although there is an improvement it is also relatively low. They should try to improve this ratio to at least 1 : 1.
- The bank overdraft shows liquidity problems and has a negative influence on the ratio.
- These ratios indicate that the business could have a hard time meeting short-term obligations. They should continue to try and improve these ratios.

11. **Stock turnover rate** for 2019 $= \dfrac{\text{Cost of sales}}{\text{Average stock}} =$ times per year

$$= \frac{276\,180}{\frac{1}{2}(55\,710 + 28\,252)}$$

$$= \frac{276\,180}{41\,981}$$

$= 6{,}6$ times per year

Comments

- The rate of stock turnover decreased from 9 times per year in 2018 to 6,6 times per year in 2019.
- The business should try to increase their rate in stock turnover as still will have a positive effect on the liquidity ratio.

12. **Stock holding period** $= \dfrac{\text{Average stock}}{\text{Cost of sales}} \times 12$

$$= \frac{\frac{1}{2}(55\,710 + 28\,252)}{276\,180} \times 12$$

$$= \frac{41\,981}{276\,180} \times 12$$

$= 1{,}8$ months

OR $\dfrac{\text{Average stock}}{\text{Cost of sales}} \times 365$

$$= \frac{\frac{1}{2}(55\,710 + 28\,252)}{276\,180} \times 365$$

$$= \frac{41\,981}{276\,180} \times 365$$

$= 55$ days

13. Average **debtors collection period** $= \dfrac{\text{Average debtors}}{\text{Credit sales}} \times \dfrac{365}{1}$

$$\frac{\frac{1}{2}(43\,660 + 25\,210)}{354\,130} \times \frac{365}{1}$$

$$= \frac{34\,435}{354\,130} \times \frac{365}{1}$$

$= 35{,}5$ days

Comments

- The average debtors collection period improved from 40 days in 2018 to 35,5 days in 2019.
- This could be one of reasons there is an improvement in liquidity.
- The credit control, however, is still not very good – they should try to collect debts within 30 days.
- Ways to improve debt collection can be:
  - Charge overdue accounts with interest.
  - Allow discount for early payments.
  - Apply credit limits – a customer first need to settle account before further purchases can be made.

14. Average **creditors payment period** $= \frac{\text{Average creditors}}{\text{Credit purchases}} \times \frac{365}{1}$

$$\frac{\frac{1}{2}(25\ 000 + 32\ 100)}{212\ 472} \times 365$$

$$= \frac{28\ 550}{212\ 472} \times 365$$

$= 49$ days

Comments

- The average creditors payment period increased from 36 days from 2018 to 49 days in 2019.
- The business should negotiate with creditors for a longer payment period between 60 to 90 days.
- They should, however, still make sure to pay creditors on time to avoid paying interest on overdue accounts and to make use of discount.

15. **Solvency ratio** = Total assets : Total liabilities

2019	2018
735 207 : (105 000 + 75 745)	716 036 : (125 000 + 60 424)
= 735 207 : 180 745	= 716 036 : 185 424
= 4,1 : 1	= 3,9 : 1

Comments

- The solvency ratio improved from 3,9 : 1 in 2018 to 4,1 : 1 in 2019.
- The solvability is good. For every 1 liability there is 4,1 assets.
- Assets exceed liabilities.

16. **Debt : equity ratio** = Long-term liabilities : Owner's equity

2019	2018
105 000 : 554 462	125 000 : 530 612
= 0,19 : 1	= 0,24 : 1

Comments

- The debt : equity ratio improved slightly from 0,24 : 1 in 2018 to 0,19 : 1 in 2019.
- The business is low geared and credit worthy – the financial risk is low.
- Own capital is more than foreign capital.
- They will be able to apply for an additional loan – they should, however, keep in mind that the current portion of an additional loan might have an influence on the liquidity of the business, which is not so good.

17. **Return on owner's equity** $= \frac{\text{Net profit}}{\text{Average owner's equity}} \times \frac{100}{1}$

$$\frac{168\ 640}{\frac{1}{2}(554\ 462 + 530\ 612)} \times \frac{100}{1}$$

$$= \frac{168\ 640}{542\ 537} \times \frac{100}{1}$$

$= 31{,}1\%$

18. Percentage earnings of partner $= \frac{\text{Total earning of partner}}{\text{Average partner's equity}} \times \frac{100}{1}$

Partner Mac

$$\frac{80\ 000 + 7\ 500 + 4000 - 7\ 716}{\frac{1}{2}(290\ 000 + 260\ 000 + 10\ 506 + 15\ 412)} \times \frac{100}{1}$$

$$= \frac{83\ 784}{287\ 959} \times \frac{100}{1}$$

$= 29{,}6\%$

Partner Adam

$$\frac{84\ 000 + 6\ 000 - 5\ 144}{\frac{1}{2}(260\ 000 + 260\ 000 - 4\ 800 - 6\ 044)} \times \frac{100}{1}$$

$$= \frac{84\ 856}{254\ 578} \times \frac{100}{1}$$

$= 33{,}3\%$

19. Comments on return on investment:
    - The business made a return of 31,1%. This is good.
    - Both partners should feel satisfied with their return on their investment. It is worth the effort and risk.
    - Compared with alternative forms of investment, it is a good percentage.