

Fully-Worked Solutions

PRACTICE 3

Formative Practice

$$1 \quad 20\,000 \times \frac{r}{100} \times t = 4\,000$$

$$200 \times r \times t = 4\,000$$

$$rt = 20$$

$$\therefore r = 5, t = 4$$

Answer: D

2

Savings and investments

(a) Types of savings

Saving accounts

Current accounts

Fixed deposit accounts

(b) Types of investments

Properties

Unit trusts

Shares

$$3 \quad (a) \quad I = RM780 \times 0.02 \times 3$$

$$= RM46.80$$

$$(b) \quad I = RM1\,560 \times 0.1 \times \frac{6}{12}$$

$$= RM78$$

$$4 \quad (a) \quad 3\,160 \times \frac{r}{100} \times 5 = 1\,264$$

$$158r = 1\,264$$

$$r = 8$$

Simple interest rate is 8%.

$$(b) \quad 9\,000 \times 0.06 \times t = 2\,340$$

$$540 \times t = 2\,340$$

$$t = 4\frac{1}{3} \text{ years}$$

$$= 4 \text{ years } 4 \text{ months}$$

$$(c) \quad P \times 0.09 \times \frac{15}{12} = 1\,575$$

$$P \times 0.1125 = 1\,575$$

$$P = 14\,000$$

Sum of money deposited is RM14 000.

$$5 \quad (a) \quad \text{Total saving}$$

$$= RM2\,000(1 + 0.04 \times 2)$$

$$= RM2\,000(1.08)$$

$$= RM2\,160$$

$$(b) \quad \text{Total saving}$$

$$= RM2\,000(1 + 0.04 \times 5)$$

$$= RM2\,000(1.2)$$

$$= RM2\,400$$

$$6 \quad (a) \quad (i) \quad \text{Total saving}$$

$$= P(1 + rt)$$

$$= RM5\,000(1 + 0.03 \times 4)$$

$$= RM5\,000(1.12)$$

$$= RM5\,600$$

$$(ii) \quad \text{Total saving}$$

$$= RM5\,000(1 + 0.12 \times 4)$$

$$= RM5\,000(1.48)$$

$$= RM7\,400$$

$$(iii) \quad \text{Total saving}$$

$$= RM5\,000(1 + 0.15 \times 4)$$

$$= RM5\,000(1.6)$$

$$= RM8\,000$$

(b) (i) Total savings increases with the interest rate.

$$7 \quad (a) \quad (i) \quad \text{Total sum of money received by cooperative A}$$

$$= RM3\,000(1 + 0.06 \times 4)$$

$$= RM3\,000(1.24)$$

$$= RM3\,720$$

$$(ii) \quad \text{Total sum of money received by cooperative B}$$

$$= RM3\,000 \left(1 + \frac{0.06}{1}\right)^{1 \times 4}$$

$$= RM3\,000(1.06)^4$$

$$= RM3\,787.40$$

(b) (i) Saving in cooperative B gives higher return of saving.

(ii) Difference return of savings between cooperatives A and B is RM67.40.

$$8 \quad (a) \quad \text{Matured value}$$

$$= RM800 \left(1 + \frac{0.04}{1}\right)^{1 \times 5}$$

$$= RM973.32$$

$$\text{Compound interest}$$

$$= RM(973.32 - 800)$$

$$= RM173.32$$

$$(b) \quad \text{Matured value}$$

$$= RM1\,500 \left(1 + \frac{0.08}{2}\right)^{2 \times 3}$$

$$= RM1\,897.98$$

$$\text{Compound interest}$$

$$= RM(1\,897.98 - 1\,500)$$

$$= RM397.98$$

(c) Matured value

$$= \text{RM}1\,200 \left(1 + \frac{0.1}{4}\right)^{2\frac{1}{4} \times 4}$$

$$= \text{RM}1\,498.64$$

Compound interest

$$= \text{RM}(1\,498.64 - 1\,200)$$

$$= \text{RM}298.64$$

(d) Matured value

$$= \text{RM}4\,200 \left(1 + \frac{0.12}{2}\right)^{12 \times 5}$$

$$= \text{RM}7\,630.13$$

Compound interest

$$= \text{RM}(7\,630.13 - 4\,200)$$

$$= \text{RM}3\,430.13$$

9 (a) $MV = P \left(1 + \frac{r}{n}\right)^{nt}$

(i) $MV = \text{RM}1\,650 \left(1 + \frac{0.09}{1}\right)^{1 \times 3}$

$$= \text{RM}1\,650(1.09)^3$$

$$= \text{RM}2\,136.80$$

(ii) $MV = \text{RM}1\,650 \left(1 + \frac{0.09}{2}\right)^{2 \times 3}$

$$= \text{RM}1\,650(1.045)^6$$

$$= \text{RM}2\,148.73$$

(iii) $MV = \text{RM}1\,650 \left(1 + \frac{0.09}{4}\right)^{4 \times 3}$

$$= \text{RM}1\,650(1.0225)^{12}$$

$$= \text{RM}2\,154.98$$

(b) (i) The future value of the deposit increases with the compounding frequency.



10 (a) (i) $MV = \text{RM}250 \left(1 + \frac{0.01}{4}\right)^{4 \times 10}$

$$= \text{RM}250(1.0025)^{40}$$

$$= \text{RM}276.26$$

(ii) $MV = \text{RM}250 \left(1 + \frac{0.04}{4}\right)^{4 \times 10}$

$$= \text{RM}250(1.01)^{40}$$

$$= \text{RM}372.22$$

(iii) $MV = \text{RM}250 \left(1 + \frac{0.1}{4}\right)^{4 \times 10}$

$$= \text{RM}250(1.025)^{40}$$

$$= \text{RM}671.27$$

(iv) $MV = \text{RM}250 \left(1 + \frac{0.2}{4}\right)^{4 \times 10}$

$$= \text{RM}250(1.05)^{40}$$

$$= \text{RM}1\,760.00$$

	Interest rate	Matured value (RM)
(i)	1%	276.26
(ii)	4%	372.22
(iii)	10%	671.27
(iv)	20%	1 760.00

(b) The matured value for the deposit of RM250 for 10 years increases when the interest rate increases.

11 (a) $\text{ROI} = \frac{\text{RM}1\,500}{\text{RM}5\,000} \times 100\%$

$$= 30\%$$

(b) $\text{ROI} = \frac{\text{RM}10\,000 - \text{RM}8\,000}{\text{RM}8\,000} \times 100\%$

$$= \frac{\text{RM}2\,000}{\text{RM}8\,000} \times 100\%$$

$$= 25\%$$

(c) $\text{ROI} = \frac{\text{RM}1\,440}{\text{RM}7\,200} \times 100\%$

$$= 20\%$$

(d) $\text{ROI} = \frac{\text{RM}4\,800}{\text{RM}12\,000} \times 100\%$

$$= 40\%$$

12 (a) (i) $\text{ROI} = \frac{\text{RM}30\,000 - \text{RM}25\,000}{\text{RM}25\,000} \times 100\%$

$$= \frac{\text{RM}5\,000}{\text{RM}25\,000} \times 100\%$$

$$= 20\%$$

(ii) $\text{ROI} = \frac{\text{RM}37\,500 - \text{RM}25\,000}{\text{RM}25\,000} \times 100\%$

$$= \frac{\text{RM}12\,500}{\text{RM}25\,000} \times 100\%$$

$$= 50\%$$

(b) The factor that influences the return of investment is time.

A shorter time has higher risk.

13 (a) Profit on the first year

$$= \text{RM}10\,000 \times \frac{8}{100}$$

$$= \text{RM}800$$

Total return on the first year

$$= \text{RM}10\,000 + \text{RM}800$$

$$= \text{RM}10\,800$$

(b) Profit on the second year

$$= \text{RM}10\,800 \times \frac{12}{100}$$

$$= \text{RM}1\,296$$

Total return on the second year

$$= \text{RM}10\,800 + \text{RM}1\,296$$

$$= \text{RM}12\,096$$

(c) Return of investment in two years

$$= \frac{\text{RM}(12\,096 - 10\,000)}{\text{RM}10\,000} \times 100\%$$

$$= 20.96\%$$

14 (a) Capital gain

$$= \text{RM}(300\,000 - 20\,000 - 1\,700 \times 12 - 12\,000$$

$$- 500 - 220\,650)$$

$$= \text{RM}26\,450$$

$$\begin{aligned}
 \text{(b) Total return} &= \text{RM}26\,450 + \text{RM}900 \times 12 \\
 &= \text{RM}37\,250 \\
 \text{ROI} &= \frac{\text{RM}37\,250}{\text{RM}250\,000} \times 100\% \\
 &= 14.9\%
 \end{aligned}$$

$$\begin{aligned}
 15 \text{ (a) Capital gain} &= \text{RM}(130\,000 - 2\,000 - 100\,000) \\
 &= \text{RM}28\,000 \\
 \text{Total return} &= \text{RM}28\,000
 \end{aligned}$$

$$\begin{aligned}
 \text{(b) ROI} &= \frac{\text{RM}28\,000}{\text{RM}100\,000} \times 100\% \\
 &= 28\%
 \end{aligned}$$

- 16 (a) The potential risk level of investment for saving account is low.
 (b) The potential risk level of investment for shares is high.
 (c) The potential risk level of investment for unit trusts is medium.
 (d) The potential risk level of investment for properties is medium.

17 (a) **Situation I**

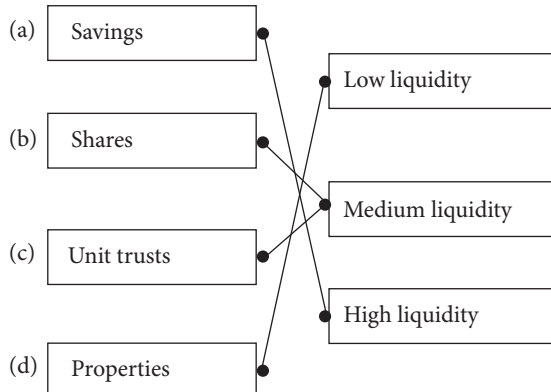
$$\begin{aligned}
 \text{Return} &= \text{RM}4\,500 + \text{RM}4\,500 \times 0.03 \times 1 \\
 &= \text{RM}4\,500 + \text{RM}135 \\
 &= \text{RM}4\,635
 \end{aligned}$$

Situation II

$$\begin{aligned}
 \text{Return} &= 1\,000 \times \text{RM}4.80 + 1\,000 \times \text{RM}0.10 \\
 &= \text{RM}4\,800 + \text{RM}100 \\
 &= \text{RM}4\,900
 \end{aligned}$$

- (b) Investment ABX, higher return.

18



$$\begin{aligned}
 19 \text{ (a) Average cost per share} &= \frac{200 \times \text{RM}10.00 + 400 \times \text{RM}12.85}{200 + 400} \\
 &= \frac{\text{RM}2\,000 + \text{RM}5\,140}{600}
 \end{aligned}$$

$$= \frac{\text{RM}7\,140}{600}$$

$$= \text{RM}11.90$$

$$\begin{aligned}
 \text{(b) Average cost per share} &= \frac{3\,000 \times \text{RM}1.40 + 5\,000 \times \text{RM}2.00 + 7\,000 \times \text{RM}1.60}{3\,000 + 5\,000 + 7\,000} \\
 &= \frac{\text{RM}4\,200 + \text{RM}10\,000 + \text{RM}11\,200}{15\,000} \\
 &= \frac{\text{RM}25\,400}{15\,000} \\
 &= \text{RM}1.69
 \end{aligned}$$

$$\begin{aligned}
 20 \text{ (a) (i) Buying cost} &= \text{RM}0.48 \times 10\,000 \\
 &= \text{RM}4\,800
 \end{aligned}$$

$$\begin{aligned}
 \text{(ii) Buying cost} &= \text{RM}0.53 \times 40\,000 \\
 &= \text{RM}21\,200
 \end{aligned}$$

$$\begin{aligned}
 \text{(iii) Buying cost} &= \text{RM}0.46 \times 20\,000 \\
 &= \text{RM}9\,200
 \end{aligned}$$

$$\begin{aligned}
 \text{(iv) Buying cost} &= \text{RM}0.55 \times 30\,000 \\
 &= \text{RM}16\,500
 \end{aligned}$$

$$\begin{aligned}
 \text{(b) (i) Average buying cost per share} &= \frac{\text{RM}4\,800 + \text{RM}21\,200 + \text{RM}9\,200 + \text{RM}16\,500}{10\,000 + 40\,000 + 20\,000 + 30\,000} \\
 &= \frac{\text{RM}51\,700}{100\,000} \\
 &= \text{RM}0.517 \\
 &= 51.7 \text{ sen}
 \end{aligned}$$

$$\begin{aligned}
 \text{(ii) Profit obtained} &= (\text{RM}0.58 - \text{RM}0.517) \times 80\,000 \\
 &= \text{RM}5\,040
 \end{aligned}$$

$$\begin{aligned}
 21 \text{ Total saving after 3 years} &= \text{RM}20\,000 \left(1 + \frac{0.06}{12} \right)^{12 \times 3} \\
 &= \text{RM}20\,000(1.005)^{36}
 \end{aligned}$$

$$\begin{aligned}
 &= \text{RM}23\,933.61 \\
 \text{Sum of money left} &= \text{RM}23\,933.61 - \text{RM}15\,000 \\
 &= \text{RM}8\,933.61
 \end{aligned}$$

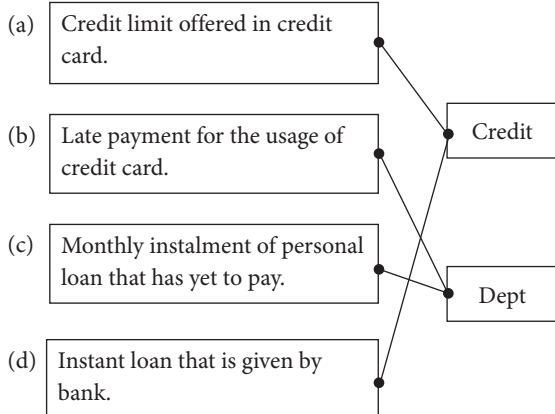
22 Never spend more than the credit limit set.

Answer: **B**

23 (a) Debt is the money that is borrowed but part or its entire including the interest imposed has not been settled.

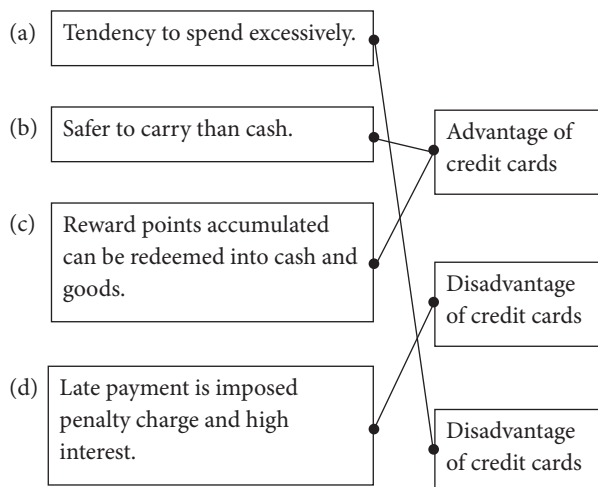
(b) Credit is the money that is eligible to borrow to be returned together with interest by instalment or lump sum in a stipulated period.

24



- 25 (a) Save from young to reduce the need of borrowing. ☒
- (b) Borrow to pay debt of loan that has yet to settle. ☒
- (c) Invest in shares or unit trusts that give attractive return in a period of time. ☒
- (d) Shorten the repayment of debt according to financial capability. ☒

26



- 27 (a) Charged incurred
 $= 0.0125 \times \text{RM}425$
 $= \text{RM}5.31$
- (b) Minimum payment
 $= 0.05 \times \text{RM}(425 + 5.31 + 684)$
 $= 0.05 \times \text{RM}1\,114.31$
 $= \text{RM}55.72$

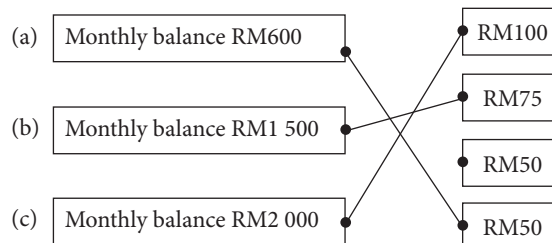
- 28 (a) Hotel payment
 $= \text{RM}350.00 \times 3.05$
 $= \text{RM}1\,067.50$
 Restaurant payment
 $= \text{RM}485.30 \times 3.05$
 $= \text{RM}1\,480.17$

Total payment for hotel and restaurant
 $= \text{RM}1\,067.50 + \text{RM}1\,480.17$
 $= \text{RM}2\,547.67$
 Administrative charge
 $= 0.01 \times \text{RM}2\,547.67$
 $= \text{RM}25.48$

Transaction	Amount of foreign currency (S\$)	Amount of local currency (RM)
Petrol		76.45
TNB		112.20
Fesko		205.50
Hotel	350.00	(i) 1 067.50
Restaurant	485.30	(ii) 1 480.17
Administrative charge (1%)		(iii) 25.48

- (b) Total amount in statement
 $= \text{RM}(76.45 + 112.20 + 205.50 + 2\,547.67 + 25.48)$
 $= \text{RM}2\,967.30$
 Minimum payment
 $= 0.05 \times \text{RM}2\,967.30$
 $= \text{RM}148.37$

29



- 30 (a) Credit card balance
 $= \text{RM}2\,000$
Situation I
 Interest for 1st month
 $= (\text{RM}2\,000 - \text{RM}100) \times 0.0125$
 $= \text{RM}1\,900 \times 0.0125$
 $= \text{RM}23.75$
 Debt balance for 1st month
 $= \text{RM}1\,900 + \text{RM}23.75$
 $= \text{RM}1\,923.75$
 Interest for 2nd month
 $= (\text{RM}1\,923.75 - \text{RM}100) \times 0.0125$
 $= \text{RM}1\,823.75 \times 0.0125$
 $= \text{RM}22.80$
 Debt balance for 2nd month
 $= \text{RM}1\,823.75 + \text{RM}22.80$
 $= \text{RM}1\,846.55$

$$\begin{aligned} &\text{Interest for 3}^{\text{rd}} \text{ month} \\ &= (\text{RM1 } 846.55 - \text{RM100}) \times 0.0125 \\ &= \text{RM1 } 746.55 \times 0.0125 \\ &= \text{RM21.83} \end{aligned}$$

$$\begin{aligned} &\text{Debt balance for 3}^{\text{rd}} \text{ month} \\ &= \text{RM1 } 746.55 + \text{RM21.83} \\ &= \text{RM1 } 768.38 \end{aligned}$$

$$\begin{aligned} &\text{Interest for 4}^{\text{th}} \text{ month} \\ &= (\text{RM1 } 768.38 - \text{RM100}) \times 0.0125 \\ &= \text{RM1 } 668.38 \times 0.0125 \\ &= \text{RM20.85} \end{aligned}$$

$$\begin{aligned} &\text{Debt balance for 4}^{\text{th}} \text{ month} \\ &= \text{RM1 } 668.38 + \text{RM20.85} \\ &= \text{RM1 } 689.23 \end{aligned}$$

Situation II

$$\begin{aligned} &\text{Interest for 1}^{\text{st}} \text{ month} \\ &= (\text{RM2 } 000 - \text{RM500}) \times 0.0125 \\ &= \text{RM1 } 500 \times 0.0125 \\ &= \text{RM18.75} \end{aligned}$$

$$\begin{aligned} &\text{Debt balance for 1}^{\text{st}} \text{ month} \\ &= \text{RM1 } 500 + \text{RM18.75} \\ &= \text{RM1 } 518.75 \end{aligned}$$

$$\begin{aligned} &\text{Interest for 2}^{\text{nd}} \text{ month} \\ &= (\text{RM1 } 518.75 - \text{RM500}) \times 0.0125 \\ &= \text{RM1 } 018.75 \times 0.0125 \\ &= \text{RM12.73} \end{aligned}$$

$$\begin{aligned} &\text{Debt balance for 2}^{\text{nd}} \text{ month} \\ &= \text{RM1 } 018.75 + \text{RM12.73} \\ &= \text{RM1 } 031.48 \end{aligned}$$

$$\begin{aligned} &\text{Interest for 3}^{\text{rd}} \text{ month} \\ &= (\text{RM1 } 031.48 - \text{RM500}) \times 0.0125 \\ &= \text{RM531.48} \times 0.0125 \\ &= \text{RM6.64} \end{aligned}$$

$$\begin{aligned} &\text{Debt balance for 3}^{\text{rd}} \text{ month} \\ &= \text{RM531.48} + \text{RM6.64} \\ &= \text{RM538.12} \end{aligned}$$

$$\begin{aligned} &\text{Interest for 4}^{\text{th}} \text{ month} \\ &= (\text{RM538.12} - \text{RM500}) \times 0.0125 \\ &= \text{RM38.12} \times 0.0125 \\ &= \text{RM0.48} \end{aligned}$$

$$\begin{aligned} &\text{Debt balance for 4}^{\text{th}} \text{ month} \\ &= \text{RM38.12} + \text{RM0.48} \\ &= \text{RM38.60} \end{aligned}$$

- (b) Debt balance of Hasni is fully paid in the fourth month.
Extra amount that is required to pay is RM38.60.

- (c) Situation 2 is more economical.

$$\begin{aligned} &\text{Total interest paid in situation I} \\ &= \text{RM}(23.75 + 22.80 + 21.83 + 20.85) \\ &= \text{RM89.23} \end{aligned}$$

$$\begin{aligned} &\text{Total interest paid in situation II} \\ &= \text{RM}(18.75 + 12.73 + 6.64 + 0.48) \\ &= \text{RM38.60} \end{aligned}$$

$$\begin{aligned} &\text{Difference of interest between the two situations} \\ &= \text{RM89.23} - \text{RM38.60} \\ &= \text{RM50.63} \end{aligned}$$

31 (a) (i) Total repayment of loan

$$\begin{aligned} &= \text{RM2 } 650(1 + 0.02 \times 3) \\ &= \text{RM2 } 650 \times 1.06 \\ &= \text{RM2 } 809 \end{aligned}$$

(ii) Instalment payment

$$\begin{aligned} &= \frac{\text{RM2 } 809}{3 \times 12} \\ &= \frac{\text{RM2 } 809}{36} \\ &= \text{RM78.03} \end{aligned}$$

(b) (i) Total repayment of loan

$$\begin{aligned} &= \text{RM4 } 320 \left(1 + 0.0025 \times 2 \frac{1}{2} \right) \\ &= \text{RM4 } 320 \times 1.0625 \\ &= \text{RM4 } 590 \end{aligned}$$

(ii) Instalment payment

$$\begin{aligned} &= \frac{\text{RM4 } 590}{2 \frac{1}{2} \times 12} \\ &= \frac{\text{RM4 } 590}{30} \\ &= \text{RM153} \end{aligned}$$

Summative Practice

1 $P \times 0.05 \times 1 = 20\,000 \times 0.04 \times 1$

$$\begin{aligned} 0.05P &= 800 \\ P &= \frac{800}{0.05} \\ &= 16\,000 \end{aligned}$$

Answer: D

2 A

$$\begin{aligned} I &= \text{RM1 } 200 \times 0.04 \times 3 \\ &= \text{RM144} \end{aligned}$$

B

$$\begin{aligned} I &= \text{RM900} \times 0.06 \times \frac{18}{12} \\ &= \text{RM81} \end{aligned}$$

C

$$\begin{aligned} I &= \text{RM1 } 500 \times 0.05 \times 2 \\ &= \text{RM150} \end{aligned}$$

D

$$\begin{aligned} I &= \text{RM1 } 000 \times 0.08 \times \frac{33}{12} \\ &= \text{RM220} \end{aligned}$$

Answer: B

3 $MV = P \left(1 + \frac{r}{n} \right)^{nt}$

$$\begin{aligned} &= \text{RM50 } 000 \left(1 + \frac{0.03}{1} \right)^{1 \times 3} \\ &= \text{RM50 } 000(0.03)^3 \\ &= \text{RM54 } 636.35 \end{aligned}$$

Alternative method

Total saving at the end of one year

$$\begin{aligned}
 &= P(1 + rt) \\
 &= \text{RM}50\,000(1 + 0.03 \times 1) \\
 &= \text{RM}50\,000(1.03) \\
 &= \text{RM}51\,500
 \end{aligned}$$

Total saving at the end of two years

$$\begin{aligned}
 &= \text{RM}51\,500(1 + 0.03 \times 1) \\
 &= \text{RM}51\,500(1.03) \\
 &= \text{RM}53\,045
 \end{aligned}$$

Total saving at the end of three years

$$\begin{aligned}
 &= \text{RM}53\,045(1 + 0.03 \times 1) \\
 &= \text{RM}53\,045(1.03) \\
 &= \text{RM}54\,636.35
 \end{aligned}$$

Answer: D

$$\begin{aligned}
 4 \quad MV &= P\left(1 + \frac{r}{n}\right)^{nt} \\
 &= \text{RM}15\,000\left(1 + \frac{0.06}{4}\right)^{4 \times 3} \\
 &= \text{RM}15\,000(1.015)^{12} \\
 &= \text{RM}17\,934.27
 \end{aligned}$$

Compound interest

$$\begin{aligned}
 &= \text{RM}17\,934.27 - \text{RM}15\,000 \\
 &= \text{RM}2\,934.27
 \end{aligned}$$

Simple interest

$$\begin{aligned}
 &= \text{RM}15\,000 \times 0.06 \times 3 \\
 &= \text{RM}2\,700
 \end{aligned}$$

Difference in interest

$$\begin{aligned}
 &= \text{RM}2\,934.27 - \text{RM}2\,700 \\
 &= \text{RM}234.27
 \end{aligned}$$

Answer: D

$$\begin{aligned}
 5 \quad \text{Initial capital} &= \text{RM}12\,000 \\
 \text{Capital gain} &= \text{RM}14\,520 - \text{RM}12\,000 \\
 &= \text{RM}2\,520 \\
 \text{Total return} &= \text{RM}2\,520 + \text{RM}480 \\
 &= \text{RM}3\,000 \\
 \text{ROI} &= \frac{\text{RM}3\,000}{\text{RM}12\,000} \times 100\% \\
 &= 25\%
 \end{aligned}$$

Answer: D

$$\begin{aligned}
 6 \quad (a) \quad (i) \quad \text{Buying cost} &= \text{RM}2.40 \times 5\,000 \\
 &= \text{RM}12\,000 \\
 (ii) \quad \text{Buying cost} &= \text{RM}1.80 \times 3\,000 \\
 &= \text{RM}5\,400 \\
 (iii) \quad \text{Buying cost} &= \text{RM}2.50 \times 2\,000 \\
 &= \text{RM}5\,000
 \end{aligned}$$

$$\begin{aligned}
 (b) \quad \text{Average cost per share} &= \frac{\text{RM}12\,000 + \text{RM}5\,400 + \text{RM}5\,000}{5\,000 + 3\,000 + 2\,000} \\
 &= \frac{\text{RM}22\,400}{10\,000} \\
 &= \text{RM}2.24
 \end{aligned}$$

(c) The benefit of the weighted cost strategy is to reduce cost per share.

7 (a) Scheme A

Loan

$$\begin{aligned}
 &= \text{RM}5\,500 - \text{RM}500 \\
 &= \text{RM}5\,000
 \end{aligned}$$

Total repayment

$$\begin{aligned}
 &= \text{RM}158 \times 36 \\
 &= \text{RM}5\,688
 \end{aligned}$$

Interest incurred

$$\begin{aligned}
 &= \text{RM}5\,688 - \text{RM}5\,000 \\
 &= \text{RM}688
 \end{aligned}$$

Scheme B

Loan

$$\begin{aligned}
 &= \text{RM}5\,500 - 0.12 \times \text{RM}5\,500 \\
 &= \text{RM}4\,840
 \end{aligned}$$

Total repayment

$$\begin{aligned}
 &= \text{RM}120 \times 48 \\
 &= \text{RM}5\,760
 \end{aligned}$$

Interest incurred

$$\begin{aligned}
 &= \text{RM}5\,760 - \text{RM}4\,840 \\
 &= \text{RM}920
 \end{aligned}$$

Difference in interest incurred

$$\begin{aligned}
 &= \text{RM}920 - \text{RM}688 \\
 &= \text{RM}232
 \end{aligned}$$

(b) Scheme A

$$\begin{aligned}
 688 &= 5\,000 \times \frac{r}{100} \times 3 \\
 r &= 4.59\%
 \end{aligned}$$

Scheme B

$$\begin{aligned}
 920 &= 5\,760 \times \frac{r}{100} \times 4 \\
 r &= 4.75\%
 \end{aligned}$$

Scheme A offered the lower interest rate.

8 (a) Price of smartphone

$$\begin{aligned}
 &= \text{RM}2\,045.00 \times 4.12 \\
 &= \text{RM}8\,425.40
 \end{aligned}$$

Price of handbag

$$\begin{aligned}
 &= \text{RM}860.00 \times 4.12 \\
 &= \text{RM}2\,447.42
 \end{aligned}$$

Total foreign online purchases

$$\begin{aligned}
 &= \text{RM}8\,425.40 + \text{RM}2\,447.42 \\
 &= \text{RM}11\,968.60
 \end{aligned}$$

$$\begin{aligned}
 \frac{k}{100} \times 11\,968.60 &= 119.69 \\
 k \times 119.686 &= 119.69 \\
 k &= 1
 \end{aligned}$$

(b) Total amount in statement

$$\begin{aligned}
 &= \text{RM}(250.00 + 940.00 + 478.75 + 11\,968.60 + 119.69) \\
 &= \text{RM}13\,757.04
 \end{aligned}$$

(c) Amount of interest shown in the statement in the subsequent month

$$= (\text{RM}13\,757.04 - \text{RM}5\,000) \times 0.0125 = \text{RM}109.46$$