

# Penyelesaian Lengkap

## PENTAKSIRAN SUMATIF

### Kertas 1

1  $0.05963 = 0.060$  (2 a.b./s.f.)

Jawapan/Answer: **D**

2  $2.14 \times 10^3 \times 1.5 \times 10^2 = 3.21 \times 10^{3+2}$   
 $= 3.21 \times 10^5$

Jawapan/Answer: **A**

3  $0.0873 \approx 0.087$

Jawapan/Answer: **B**

I	9.5 eksabait = $9.5 \times 10^{18}$ bait 9.5 exabytes = $9.5 \times 10^{18}$ bytes
II	1 250 femtoliter/femtolitres = $(1.25 \times 10^3) \times 10^{-15}$ liter/litres = $1.25 \times 10^{-12}$ liter/litres
II	25 desimeter/decimetres = $(2.5 \times 10) \times 10^{-1}$ meter/metres = 2.5 meter/metres $\neq 2.5 \times 10^2$ meter/metres
IV	0.056 nanometer/nanometres = $(5.6 \times 10^{-2}) \times 10^{-9}$ meter/metres = $5.6 \times 10^{-11}$ meter/metres

Jawapan/Answer: **D**

5  $8(2 - 7) + \frac{2}{5} \div 0.25 = 8(-5) + \frac{2}{5} \div \frac{1}{4}$   
 $= -40 + \frac{2}{5} \times 4$   
 $= \frac{-200 + 8}{5}$   
 $= \frac{-192}{5}$

Jawapan/Answer: **D**

6 Bilangan murid lelaki kelab Sains  
Number of boys in Science club = 24

$\frac{2}{3} \times$  bilangan ahli kelab Sains/Number of Science club members = 24

Bilangan ahli kelab Sains  
Number of Science club members

$= 24 \times \frac{3}{2} = 36$

Bilangan ahli kelab Matematik  
Number of Mathematics club members

$= \frac{36}{2} \times 3 = 54$

Jawapan/Answer: **B**

7  $P = \text{RM}5\,000$ ,  $r = \frac{3}{100} = 0.03$ ,  $t = 6$

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

$$= 5\,000 \left(1 + \frac{0.03}{4}\right)^{(4)(6)}$$

$$= \text{RM}5\,982.07$$

Jawapan/Answer: **C**

8  $a < 0$  dan/and  $|a| < 3$

$\therefore a = -1$

Jawapan/Answer: **B**

9 Katakan umur Linda tahun ini

Let Linda's age this year =  $x$

Umur kakak tahun ini/Linda's sister age this year

$= x + 15$

4 tahun yang lalu/4 years ago,

$(x - 4)(x + 15 - 4) = 364$

$(x - 4)(x + 11) = 364$

$x^2 + 11x - 4x - 44 - 364 = 0$

$x^2 + 7x - 408 = 0$

$(x + 24)(x - 17) = 0$

$x = 17$  (-24 ditolak/rejected)

Jumlah umur tahun hadapan/Total age next year

$= (17 + 1) + (17 + 15 + 1) = 51$

Jawapan/Answer: **A**

10  $3(5^2) + 4(5) + 3 = 3(25) + 20 + 3$   
 $= 98$

$$\begin{array}{r} 8 \overline{) 98} \\ 8 \overline{) 12} \dots 2 \\ 8 \overline{) 1} \dots 4 \\ 0 \dots 1 \end{array}$$

$98_{10} = 142_8$

Jawapan/Answer: **C**

11  $10101_2 + 1010111_2 = 1101100_2$   
 $= 108_{10}$

$$\begin{array}{r} 7 \overline{) 108} \\ 7 \overline{) 15} \dots 3 \\ 7 \overline{) 2} \dots 1 \\ 0 \dots 2 \end{array}$$

$108_{10} = 213_7$

Jawapan/Answer: **B**

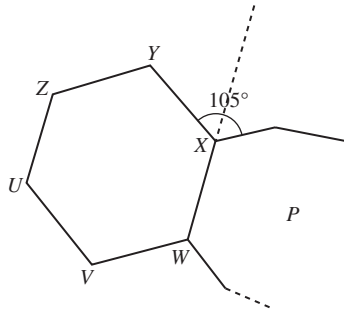
12 Tidak mematuhi bentuk I hujah deduktif yang sah  $\rightarrow$   
Tidak sah

Does not comply with the form I of deductive argument.  
 $\rightarrow$  Not valid

Tidak munasabah kerana tidak sah dan kesimpulan adalah palsu. Comel mungkin bukan kucing.  
*Not sound because it is not valid and the conclusion is false. Comel maybe is not a cat.*

Jawapan/Answer: **A**

13



Sudut peluaran heksagon/Exterior angle of hexagon

$$= \frac{360^\circ}{6}$$

$$= 60^\circ$$

Sudut peluaran poligon P/Exterior angle of polygon P

$$= 105^\circ - 60^\circ$$

$$= 45^\circ$$

Bilangan sisi poligon P/Number of sides of polygon P

$$= \frac{360^\circ}{45}$$

$$= 8$$

Jumlah sudut pedalaman poligon P

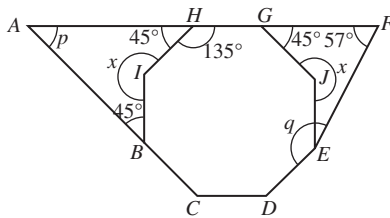
Sum of interior angles of polygon P

$$= (8 - 2) \times 180^\circ$$

$$= 1\ 080^\circ$$

Jawapan/Answer: **C**

14



Sudut peluaran oktagon/Exterior angle of octagon

$$= \frac{360^\circ}{8}$$

$$= 45^\circ$$

Sudut pedalaman oktagon/Interior angle of octagon

$$= 180^\circ - 45^\circ$$

$$= 135^\circ$$

$$x = 360^\circ - 135^\circ$$

$$= 225^\circ$$

$$p = 360^\circ - 225^\circ - 45^\circ - 45^\circ$$

$$= 45^\circ$$

$$\angle JEF = 360^\circ - 225^\circ - 45^\circ - 57^\circ$$

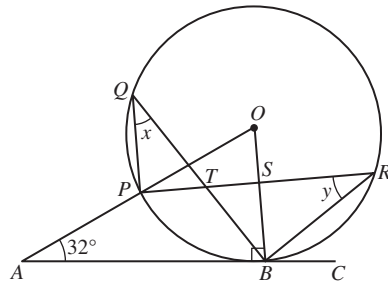
$$= 33^\circ$$

$$p + q = 45^\circ + 135^\circ + 33^\circ$$

$$= 213^\circ$$

Jawapan/Answer: **D**

15



$$\angle AOB = 180^\circ - 90^\circ - 32^\circ$$

$$= 58^\circ$$

$$x = \frac{58^\circ}{2}$$

$$= 29^\circ$$

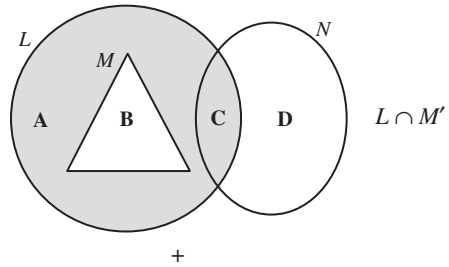
$$y = x$$

$$x + 3y = 29^\circ + 3(29^\circ)$$

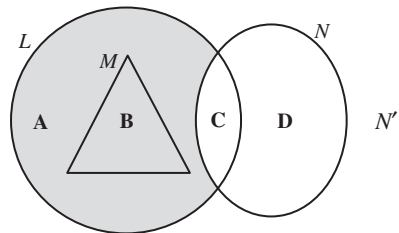
$$= 116^\circ$$

Jawapan/Answer: **C**

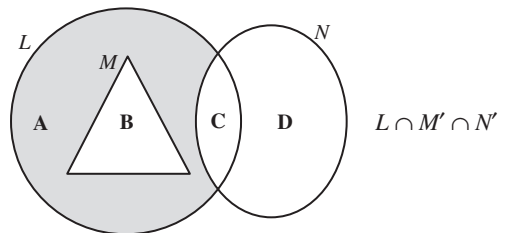
16



+



↓



Jawapan/Answer: **A**

17  $\xi = \{28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41\}$

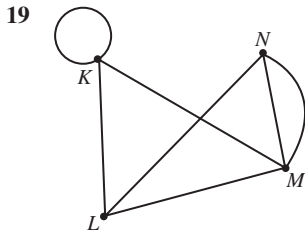
$$M = \{29, 30, 32, 34, 36, 38, 41\}$$

$$M' = \{28, 31, 33, 35, 37, 39, 40\}$$

$$n(M') = 7$$

Jawapan/Answer: **A**

18 Jawapan/Answer: **D**



- A  $n(E) = 7$   
 B  $d(K) = 4$   
 C Graf terhasil **bukan** graf mudah kerana terdapat gelung dan berbilang tepi.  
*The graph produced is **not** a simple graph because there are loop and multiple edges.*  
 D  $\sum d(V) = 2(7)$   
 $= 14$

Jawapan/Answer: C

20  $\frac{5p}{3} + 3 \leq \frac{2p - 4}{5}$

Darab 15 pada kedua-dua belah

*Multiply both sides with 15*

$$25p + 45 \leq 6p - 12$$

$$25p - 6p \leq -12 - 45$$

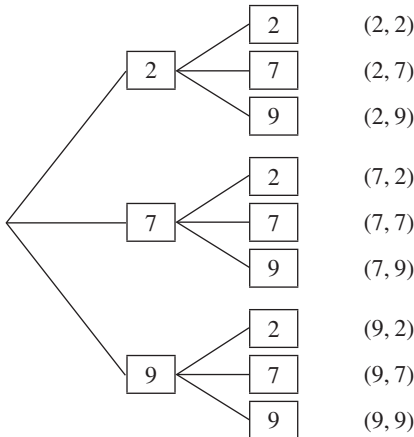
$$19p \leq -57$$

$$p \leq -3$$

Jawapan/Answer: A

21

Kesudahan  
Outcomes



Jawapan/Answer: D

22 Luas di bawah graf/Area under the graph = 50

$$\frac{1}{2} (4 + 7)(4) + (t - 4)(7) = 50$$

$$22 + 7t - 28 = 50$$

$$7t = 50 + 6$$

$$t = \frac{56}{7}$$

$$= 8$$

Jawapan/Answer: A

23 Jumlah jarak = Luas di bawah graf

*Total distance = Area under the graph*

$$= \frac{1}{2} (2 + 8)(2) + (6 - 2)(8) + \frac{1}{2} (8 + 20)(14 - 6)$$

$$= 10 + 32 + 112$$

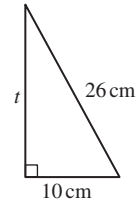
$$= 154 \text{ m}$$

$$\text{Laju purata/Average speed} = \frac{154}{14}$$

$$= 11 \text{ m s}^{-1}$$

Jawapan/Answer: A

24



Katakan tinggi kon =  $t$

*Let the height of cone =  $t$*

$$10^2 + t^2 = 26^2$$

$$t^2 = 676 - 100$$

$$t^2 = 576$$

$$t = 24 \text{ cm}$$

Jumlah isi padu/Total volume

$$= \frac{22}{7} (10^2)(16) + \left(\frac{1}{3}\right) \left(\frac{22}{7}\right) (10^2)(24)$$

$$= 7542.86$$

$$= 7543$$

$$= 7.543 \times 10^3$$

Jawapan/Answer: D

25  $PU = \sqrt{14^2 + 14^2}$   
 $= 19.8 \text{ cm}$

$$\tan \angle VPU = \frac{8}{19.8}$$

$$= 0.404$$

Jawapan/Answer: B

26 Sisihan piawai/Standard deviation =  $2 \times 3.399$   
 $= 6.798$

Jawapan/Answer: C

27 Min =  $\frac{23 + 24 + 2(25) + 26 + 30 + 31 + 2(32) + 34 + 36 + 37 + 3(40) + 41 + 42 + 50 + 51 + 54}{20}$

$$\text{Mean} = \frac{713}{20}$$

$$= 35.65 \text{ tahun/years}$$

Median = Antara data ke-10 dan ke-11

*Between the 10<sup>th</sup> data and 11<sup>th</sup> data*

$$= \frac{34 + 36}{2}$$

$$= 35$$

Beza/Difference =  $35.65 - 35$   
 $= 0.65$

Jawapan/Answer: D

- 28 Jumlah simpanan diperlukan/*Total savings needed*  
 $= \left( \frac{10}{100} \times \text{RM}600\,000 \right) + \text{RM}10\,000$   
 $= \text{RM}70\,000$   
 Jumlah simpanan bulanan/*Total monthly savings*  
 $= \frac{70\,000}{5 \times 12}$   
 $= \text{RM}1\,166.67$   
 Baki pendapatan bulanan/*Balance of monthly income*  
 $= \text{RM}8\,200 - 5\,600 - 1\,166.67$   
 $= \text{RM}1\,433.33$

Jawapan/*Answer*: C

- 29 Aliran tunai/*Cash flow* = 300  
 $3\,850 - 1\,750 - x = 300$   
 $x = 3\,850 - 1\,750 - 300$   
 $= 1\,800$

Jawapan/*Answer*: B

- 30 Membeli sebuah rumah banglo/*Buy a bungalow*

Jawapan/*Answer*: A

- 31  $\frac{6x^2 - 10x - 16}{3x - 8} = \frac{2(3x^2 - 5x - 8)}{3x - 8}$   
 $= \frac{2(3x - 8)(x + 1)}{3x - 8}$   
 $= 2(x + 1)$

Jawapan/*Answer*: D

- 32  $\sqrt[3]{(27x^9y^3 \times x^4y^{-2} \div 6x^2y^3)} = \frac{(3^3x^9y^3)^{\frac{1}{3}} \times x^4y^{-2}}{6x^2y^3}$   
 $= \frac{3x^{-3+4-(-2)}y^{1+(-2)-3}}{6}$   
 $= \frac{x^3y^{-4}}{2}$   
 $= \frac{x^3}{2y^4}$

Jawapan/*Answer*: C

- 33 Graf yang mempunyai kecerunan 2 dan pintasan- $y = 3$   
*Graph with gradient 2 and y-intercept = 3*

Jawapan/*Answer*: D

- 34 Jumlah luas permukaan/*Total surface area*  
 $= 2(1.7 \times 2.7) + 2(1.7 \times 0.7) + 2(0.7 \times 2.7)$   
 $= 15.34 \text{ m}^2$   
 Kos/*cost* =  $\text{RM}45 \times 15.34$   
 $= \text{RM}690.30$

Jumlah bayaran/*Total payable*  
 $= \text{RM}(690.30 + 80)$   
 $= \text{RM}770.30$

Jawapan/*Answer*: D

- 35  $1 - P(\text{gagal kedua-dua mata pelajaran/fail in both subjects})$   
 $= 1 - 0.5(0.2)$   
 $= 1 - 0.1$   
 $= 0.9$

Jawapan/*Answer*: D

36

Jumlah masa (minit) <i>Total time (minutes)</i>	30	45	60	75	90	105	120	150
Bilangan murid <i>Number of students</i>	1	4	5	6	7	5	4	3
Kekerapan longgokan <i>Cumulative Frequency</i>	1	5	10	16	23	28	32	35

$$C_1 \quad C_2 - C_5 \quad C_6 - C_{10} \quad C_{11} - C_{16} \quad C_{17} - C_{23} \quad C_{24} - C_{28} \quad C_{29} - C_{32} \quad C_{33} - C_{35}$$

$\uparrow Q_1$

$\uparrow Q_3$

Julat antara kuartil =  $105 - 60$

*Interquartile range* = 45

Jawapan/*Answer*: A

- 37 Jawapan/*Answer*: C

- 38 Jawapan/*Answer*: B

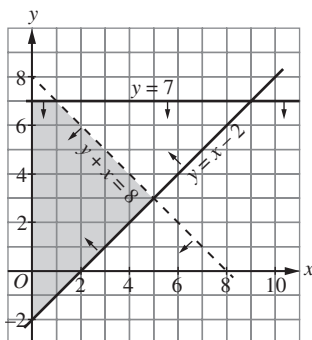
- 39 Jawapan/*Answer*: B

- 40 Jawapan/*Answer*: A

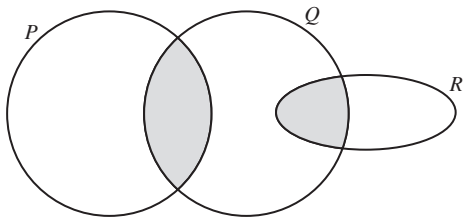
## Kertas 2

### Bahagian A

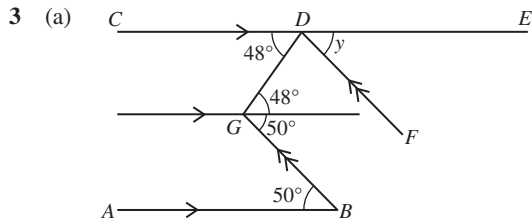
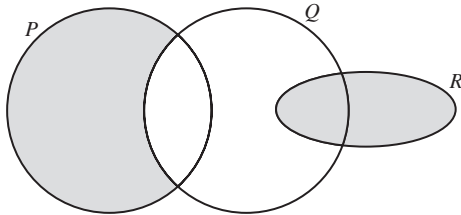
1



2  $Q \cap (P \cup R)$



(a)  $(P \cap Q') \cup R$



Lukis satu garis lurus yang selari dengan  $AB$  dan  $CD$  untuk mendapatkan sudut berselang-seli.  
*Draw a straight line that is parallel to  $AB$  and  $CD$  to get alternate angle.*

$$x = 48^\circ + 50^\circ = 98^\circ$$

(b)  $BG$  selari dengan  $FD$ , maka  
 $\angle GDF = 180^\circ - 98^\circ$  (sudut pedalaman/interior angle)  
 $= 82^\circ$   
 $y = 180^\circ - 48^\circ - 82^\circ = 50^\circ$

4

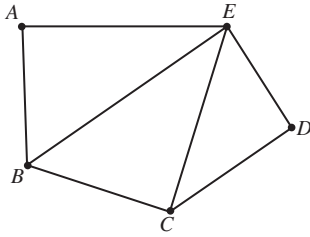
$$\begin{array}{r} 3 \ 6 \ 1_7 \\ + \ 5 \ 2 \ 4_7 \\ \hline 1 \ 2 \ 1 \ 5_7 \end{array}$$

$$1(7^3) + 2(7^2) + 1(7) + 5 = 453$$

$$\begin{array}{r} 8 \overline{) 453} \\ 8 \overline{) 56} \dots 5 \\ 8 \overline{) 7} \dots 0 \\ \underline{\phantom{0} 0} \dots 7 \end{array}$$

$$\therefore 1215_7 = 705_8$$

5  $n(V) = 5, \sum d(v) = 14$   
 $2n(E) = 14$   
 $n(E) = 7$



(Atau graf lain yang memenuhi syarat diberi.)  
(Or other graphs that fulfill the conditions given.)

- 6 Isi padu kuboid  $ABCDEFGH$  + isi padu separuh silinder  
Volume of cuboid  $ABCDEFGH$  + volume of half cylinder

$$= [4 \times 8 \times 10] + \left[ \frac{1}{2} \times \left( \frac{22}{7} \right) \times 4^2 \times (10 - 4) \right]$$

$$= 320 + 150 \frac{6}{7}$$

$$= 470 \frac{6}{7} \text{ cm}^3$$

- 7 (a)  $x^2 + (5x - 11)^2 = (3x + 4)^2$   
 $x^2 + 25x^2 - 110x + 121 = 9x^2 + 24x + 16$   
 $26x^2 - 110x + 121 - 9x^2 - 24x - 16 = 0$   
 $17x^2 - 134x + 105 = 0$   
 $(17x - 15)(x - 7) = 0$

$$x = \frac{15}{17} \text{ (ditolak/rejected)}$$

$$\therefore x = 7$$

- (b) Perimeter =  $7 + [5(7) - 11] + [3(7) + 4]$   
 $= 56 \text{ cm}$

$$\text{Luas/Area} = \frac{1}{2} \times [5(7) - 11] \times 7$$

$$= 84 \text{ cm}^2$$

- 8  $\bar{x} = 7 \frac{17}{30}$

$$\frac{3(5) + 5(6) + 7x + 6(8) + 5(9) + 4(10)}{3 + 5 + x + 6 + 5 + 4} = \frac{227}{30}$$

$$\frac{178 + 7x}{23 + x} = \frac{227}{30}$$

$$5\ 340 + 210x = 5\ 221 + 227x$$

$$119 = 17x$$

$$x = 7$$

- 9 (a) Sah kerana mematuhi bentuk hujah deduktif yang sah.  
Valid because it complies with the valid form of deductive argument.

Tidak munasabah kerana premis 1 dan kesimpulan adalah palsu.  
Not sound because premise 1 and conclusion are false.

- (b) Jika  $x - 9 > 0$ , maka  $x > 9$ .  
If  $x - 9 > 0$ , then  $x > 9$ .

$\therefore$  Benar/True.

- 10 (a) Jumlah pinjaman/Loan amount,  $P = \frac{90}{100} \times \text{RM}98\ 000$   
 $= \text{RM}88\ 200$

$$I = Prt$$

$$= \text{RM}88\ 200 \times \frac{2.5}{100} \times 9$$

$$= \text{RM}19\ 845$$

$$\begin{aligned}
 \text{(b) Ansuran bulanan/Monthly instalment} &= \frac{P + I}{12t} \\
 &= \frac{\text{RM}88\,200 + \text{RM}19\,845}{12(9)} \\
 &= \text{RM}1\,000.42
 \end{aligned}$$

## Bahagian B

$$11 \text{ (a) } \frac{1}{2}(x+3)(x+2) = x^2$$

$$x^2 + 5x + 6 = 2x^2$$

$$x^2 - 5x - 6 = 0 \text{ (tertunjuk/shown)}$$

$$\text{(b) } x^2 - 5x - 6 = 0$$

$$(x+1)(x-6) = 0$$

$$x = 6 \text{ (tolak nilai negatif bagi } x \text{ / reject negative value of } x \text{)}$$

$$\text{(c) Jumlah luas dua bentuk/Total area of two shapes} = 2 \times 6^2 = 72 \text{ cm}^2$$

$$\text{(d) Panjang } RQ \text{/Length of } RQ = \sqrt{9^2 + 8^2} = 12.04$$

$$\text{Panjang wayar diperlukan/Length of wire needed} = 9 + 8 + 12.04 + 4(6) = 53.04 \text{ cm}$$

$$12 \text{ (a) Tempoh masa/Duration} = (3.5 - 1) \times 60 \text{ minit/minutes} = 150 \text{ minit/minutes}$$

$$\text{(b) Jumlah jarak dilalui/Total distance travelled} = 439.5$$

$$\frac{1}{2}(3.5 + 2.5)(v - 20) + \frac{1}{2}(v - 20 + v)(5 - 3.5) + \frac{1}{2}(1)(v) = 439.5$$

$$6v - 120 + (2v - 20)(1.5) + v = 2(439.50)$$

$$6v - 120 + 3v - 30 + v = 879$$

$$10v = 879 + 120 + 30$$

$$10v = 1\,029$$

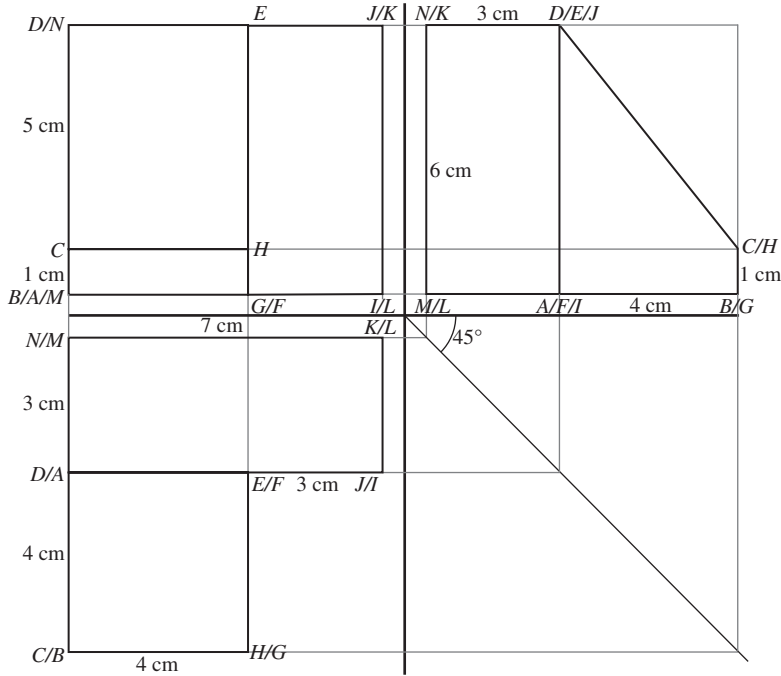
$$v = 102.9 \text{ km j}^{-1} \text{ (km h}^{-1} \text{)}$$

$$\text{(c) Kadar perubahan laju/Rate of change in speed}$$

$$= \frac{(0 - 102.9) \text{ km j}^{-1} \text{ (km h}^{-1} \text{)}}{1 \text{ j (h)}}$$

$$= -102.9 \text{ km j}^{-2} \text{ (km j}^{-2} \text{)}$$

- 13 (b) Dongakan Depan/*Front Elevation* (c) Dongakan Sisi/*Side Elevation*



(a) Pelan/*Plan*

(d)  $CD = 6.4$  cm

14 (a) 
$$\frac{pq + 3q}{p^2 - p} \div \frac{p^2 + p - 6}{p^2 - 1} = \frac{q(p + 3)}{p(p - 1)} \times \frac{p^2 - 1}{p^2 + p - 6}$$

$$= \frac{q(p + 3)}{p(p - 1)} \times \frac{(p + 1)(p - 1)}{(p + 3)(p - 2)}$$

$$= \frac{q(p + 1)}{p(p - 2)}$$

(b) (i) Katakan/*Let*  $x =$  tembikai susu/*honeydew melon*,  $y =$  belimbing/*starfruit*

$$5x + 7y = 58$$

$$x + 4y = 22$$

(ii)  $5x + 7y = 58 \dots \textcircled{1}$

$x + 4y = 22 \dots \textcircled{2}$

$\textcircled{2} \times 5:$   $5x + 20y = 110 \dots \textcircled{3}$

$\textcircled{3} - \textcircled{1}:$   $13y = 52$   
 $y = 4$

Daripada/*From*  $\textcircled{2}$ ,  $x + 4(4) = 22$

$$x = 6$$

Harga 1 kg tembikai susu/*Price of 1 kg of honeydew melon* = RM6

Harga 1 kg belimbing/*Price of 1 kg of starfruits* = RM4

15 (a) Simpanan tetap bulanan/*Monthly fixed savings* =  $10\% \times \text{RM}10\,800$   
 $= \text{RM}1\,080$



(b)

**Pelan Kewangan Encik Peter**  
*Mr Peter's Financial Plan*

<b>Pendapatan dan Perbelanjaan</b> <i>Income and Expenditure</i>	<b>(RM)</b>	
Pendapatan bersih Encik Peter <i>Net salary of Mr Peter</i>	10 800	
Pendapatan pasif <i>Passive income</i>	0	
<b>Jumlah pendapatan bulanan</b> <i>Total monthly income</i>		10 800
Tolak simpanan tetap bulanan <i>Minus fixed monthly savings</i>	1 080	
Tolak simpanan dana kecemasan/ <i>Minus emergency fund</i>	100	
<b>Baki pendapatan</b> <i>Income balance</i>		9 620
<b>Tolak perbelanjaan tetap bulanan</b> <i>Minus monthly fixed expenses</i>		
Ansuran pinjaman perumahan <i>Instalment of housing loan</i>	2 300	
Ansuran pinjaman kereta (1) <i>Instalment of car loan (1)</i>	1 350	
Ansuran pinjaman kereta (2) <i>Instalment of car loan (2)</i>	890	
Premium insurans/ <i>Insurance premiums</i>	1 100	
<b>Jumlah perbelanjaan tetap bulanan</b> <i>Total monthly fixed expenses</i>		5 640
<b>Tolak perbelanjaan tidak tetap bulanan</b> <i>Minus monthly variable expenses</i>		
Perbelanjaan petrol dan tol/ <i>Petrol and toll expenses</i>	380	
Bayaran bil utiliti/ <i>Utilities bills payment</i>	500	
Perbelanjaan dapur/ <i>Kitchen expenditure</i>	1 200	
Isteri/ <i>Wife</i>	800	
Anak-anak/ <i>Children</i>	500	
Ibu bapa/ <i>Parents</i>	500	
<b>Jumlah perbelanjaan tidak tetap bulanan</b> <i>Total monthly variable expenses</i>		3 880
<b>Lebih pendapatan atau defisit</b> <i>Surplus of income or deficit</i>		100

(c) Jumlah simpanan tetap selepas 6 bulan/*Total fixed savings after 6 months* =  $6 \times \text{RM}1\ 080$   
= RM6 480

Jumlah dana kecemasan/*Emergency fund* =  $6 \times \text{RM}100$   
= RM600

Jumlah lebihan bagi 6 bulan/*Total surplus for 6 months* =  $6 \times \text{RM}100$   
= RM600

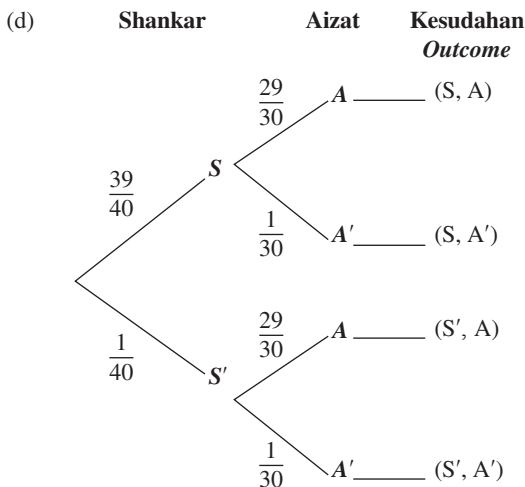
Jumlah simpanan/*Total savings* =  $\text{RM}(6\ 480 + 600 + 600)$   
= RM7 680

Dia tidak dapat mencapai matlamatnya. Jumlah wang tidak mencukupi kerana masih kekurangan RM2 320. Dia memerlukan 8 bulan untuk mencapai matlamat ini.

*He cannot achieve his goal. The total amount of money is not sufficient, still lack of RM2 320. He needs 8 months to achieve his goal.*

**Bahagian C**

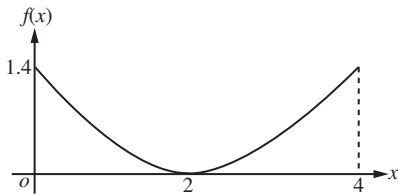
- 16 (a) (i)  $120 - 80 = 40$  minit/*minutes*  
 (ii) jam 0800 + 70 min = jam 0910  
 Aizat bertolak dari plaza tol A pada pukul 9.10 pagi.  
 $0800 \text{ hours} + 70 \text{ min} = 0910 \text{ hours}$   
 Aizat departed from the toll Plaza A at 9.10 a.m.  
 (iii) Mereka bertemu di Q, jarak dari plaza tol B =  $200 - 100$   
 $= 100$  km  
 They meet at Q, distance from toll Plaza B =  $200 - 100$   
 $= 100$  km  
 (iv) Laju purata/*Average speed* =  $\frac{200 \text{ km}}{\frac{180}{60} \text{ j(h)}}$ ,  
 $= 66\frac{2}{3}$  km/j(km/h)
- (b) (i) Jumlah simpanan yang diperlukan/*Total savings needed* =  $\frac{10}{100} \times \text{RM}75\,000$   
 $= \text{RM}7\,500$   
 (ii) Bilangan bulan/*Number of months* =  $\frac{7\,500}{500}$   
 $= 15$  bulan/*months*
- (c) Jarak antara rumah Shankar dan Aizat/*Distance between Shankar's house and Aizat's house*  
 $= \sqrt{[1 - (-3)]^2 + (6 - 3)^2}$   
 $= \sqrt{16 + 9}$   
 $= 5$  km  
 Jarak antara rumah Shankar dan pejabat/*Distance between Shankar's house and office* = 5 km  
 Jumlah jarak ulang alik setiap hari/*Daily round-trip distance* =  $2 \times (5 + 5)$  km  
 $= 20$  km  
 Jumlah jarak dilalui dalam bulan Jun/*Total distance travelled in June* =  $4 \times 5 \times 20$  km  
 $= 400$  km  
 Jumlah bayaran diterima oleh Aizat/*Total payment received by Aizat* =  $50\% \times 400 \text{ km} \times \text{RM}1.50$   
 $= \text{RM}300$



S – Shankar awal atau tepat masa/*Shankar is early or on time*  
 S' – Shankar lewat/*Shankar is late*  
 A – Aizat awal atau tepat masa/*Aizat is early or on time*  
 A' – Aizat lewat/*Aizat is late*

Kebarangkalian salah seorang lewat/Probability that one of them is late  
 $= P(S, A')$  atau/or  $P(S', A)$   
 $= \frac{39}{40} \left( \frac{1}{30} \right) + \frac{1}{40} \left( \frac{29}{30} \right)$   
 $= \frac{17}{300}$

17



(a) (i) Persamaan paksi simetri/Equation of axis of symmetry,  $x = 2$

$$-\frac{b}{2a} = 2$$

$$b = -4a \dots\dots \textcircled{1}$$

Gantikan (2, 0) ke dalam  $f(x) = ax^2 + bx + 1.4$

Substitute (2, 0) into  $f(x) = ax^2 + bx + 1.4$

$$0 = a(2)^2 + b(2) + 1.4$$

$$4a + 2b + 1.4 = 0 \dots\dots \textcircled{2}$$

Gantikan  $\textcircled{1}$  ke dalam  $\textcircled{2}$

Substitute  $\textcircled{1}$  into  $\textcircled{2}$

$$4a + 2(-4a) + 1.4 = 0$$

$$4a - 8a + 1.4 = 0$$

$$-4a + 1.4 = 0$$

$$4a = 1.4$$

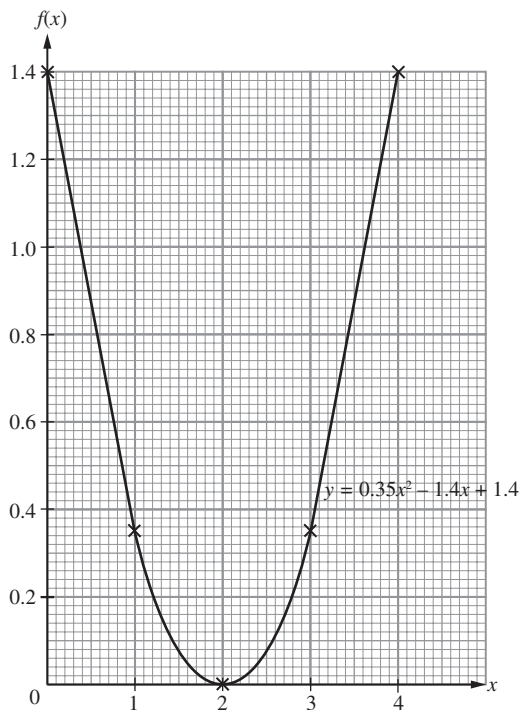
$$a = 0.35$$

$$b = -4(0.35)$$

$$= -1.4$$

(ii)

$x$	0	1	2	3	4
$f(x)$	1.4	0.35	0	0.35	1.4



- (b) (i) Jenama/Brand  $P = 7$   
Jenama/Brand  $Q = 8.3$
- (ii) Jenama/Brand  $P$ :  
Julat antara kuartil/*Interquartile range*  $= 8.3 - 6.2$   
 $= 2.1$
- Jenama/Brand  $Q$ :  
Julat antara kuartil/*Interquartile range*  $= 9 - 7$   
 $= 2$
- (iii) Rashid patut memilih papan selaju berjenama  $Q$ . Jenama ini mendapat lebih banyak skor penilaian yang tinggi daripada pelanggannya. Julat antara kuartil yang lebih kecil menunjukkan konsistensi prestasi produk itu.  
*Rashid should choose the skateboard from brand  $Q$ . This brand obtains more high ratings from customers than that of brand  $P$ . The smaller interquartile range shows the consistency of the product's quality.*