

**1449/1 & 2
Matematik
Kertas 1/2
2018**

JABATAN PELAJARAN TERENGGANU

**SKEMA PEMARKAHAN
SIJIL PELAJARAN MALAYSIA**

JUN 2018

MATEMATIK 1449/1/2

Kertas 1 & 2

PERATURAN PEMARKAHAN

$$\text{Markah} = \frac{\text{Kertas 1} + \text{Kertas 2}}{140}$$

Peraturan Pemarkahan ini mengandungi 14 halaman bercetak

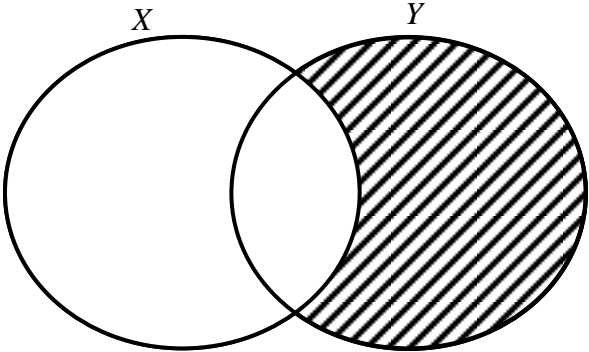
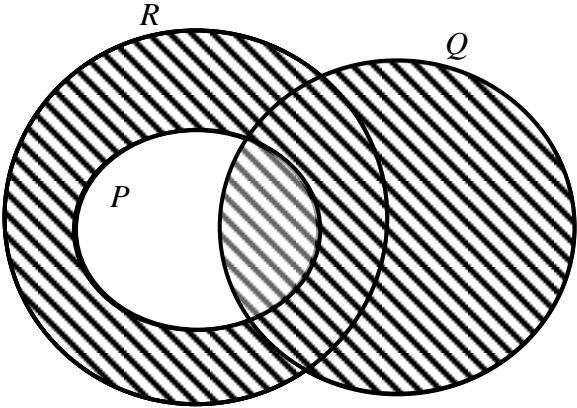
SKEMA PERMARKAHAN
SIJIL PELAJARAN MALAYSIA
JUN 2018

MATEMATIK KERTAS 1

NO	JAWAPAN	NO	JAWAPAN	NO	JAWAPAN	NO	JAWAPAN
1	C	11	A	21	C	31	A
2	C	12	B	22	D	32	C
3	C	13	B	23	B	33	B
4	A	14	C	24	B	34	D
5	B	15	A	25	B	35	A
6	B	16	D	26	A	36	C
7	D	17	C	27	A	37	B
8	D	18	B	28	D	38	B
9	A	19	A	29	D	39	D
10	C	20	D	30	B	40	A

MATEMATIK KERTAS 2

Bahagian A

Soalan	Peraturan Permarkahan	Markah	
1	<p>(a)</p>  <p>(b)</p> 	P1	
2	$21x - 4y = 198$ $18x - 7y = 159$ $y = \frac{198 - 21x}{-4}$ $y = 3, \quad x = 10$	K1 K1 K1	<hr/> 3
		N1 N1	<hr/> 5

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Soalan	Peraturan Permarkahan	Markah	
3	<p>(a) $p(p+4) = 12$ $p^2 + 4p - 12 = 0$</p> <p>(b) $p^2 + 4p - 12 = 0$ $(p-2)(p+6) = 0$ $p = 2, p = -6$</p> <p>\therefore Umur Aiman = $2 + 4 = 6$ tahun</p>	K1 K1 N1	<hr style="width: 50px; margin: 0 auto;"/> 3
4	<p>Sudut $\angle QTS$</p> $\text{Kos } \angle QTS = \frac{1.35}{2.4}$ $= 55.77$ <p>\therefore Papan gelungsur itu selamat digunakan kerana sudut $55.77^\circ < 60^\circ$</p>	P1 K1 N1	<hr style="width: 50px; margin: 0 auto;"/> 3
5	<p>(a) i) Palsu ii) Benar</p> <p>(b) Premis 1 : Jika $x = 3$, maka $2^{x+1} = 16$</p> <p>(c) $\frac{360}{n} @ 180 - \left[\frac{(n-2)180}{n} \right], n = 3,4,5,6, \dots$</p>	P1 P1 P1 K1 N1	<hr style="width: 50px; margin: 0 auto;"/> 5

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Soalan	Peraturan Permarkahan	Markah	
6	<p>(a) $y = \frac{4}{3}x + 3$ \therefore Pintasan $y = 3$</p> <p>(b) $KL = \sqrt{3^2 + 4^2} = 5$ <i>Rombus</i> : Maka Koordinat $L = (5, 3)$</p> <p>(c) <i>Garis LM melalui titik (5, 3)</i> Maka $3 = \frac{4}{3}(5) + c$ $c = -\frac{11}{3}$ $\therefore y = \frac{4}{3}x - \frac{11}{3}$</p>	K1	
		K1	
		N1	
		K1	
		K1	
		N1	5
7	<p>Isipadu Lebihan = $I_{\text{selinder}} - (I_{\text{kon}} + I_{\text{hemisfera}})$</p> $= \left(\frac{22}{7} \times 3^2 \times 7 \right) - \left[\left(\frac{1}{3} \times \frac{22}{7} \times 3^2 \times 7 \right) + \left(\frac{2}{3} \times \frac{22}{7} \times 3^3 \right) \right]$ $= 198 - \left(66 + \frac{396}{7} \right)$ $= \frac{528}{7}$	K1 K1	
		N1	3

Soalan	Peraturan Permarkahan	Markah	
8	<p>(a) $(1 \times 9) - ((2x) \times (-3)) = 0$ $6x = -9$ $x = -\frac{3}{2}$</p> <p>(b) i) $30x + 50y = 2190$ $50x + 40y = 2220$</p> <p>ii) $\begin{bmatrix} 30 & 50 \\ 50 & 40 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 2190 \\ 2220 \end{bmatrix}$ $\begin{bmatrix} x \\ y \end{bmatrix} = \frac{1}{1300} \begin{bmatrix} 40 & -50 \\ -50 & 30 \end{bmatrix} \begin{bmatrix} 2190 \\ 2220 \end{bmatrix}$ $\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 18 \\ 33 \end{bmatrix}$ $x = 18$ $y = 33$</p>	<p>K1</p> <p>N1</p> <p>P1</p> <p>K1</p> <p>N1</p> <p>N1</p>	<p>6</p>
9	<p>(a) $= \left(\frac{1}{2} \times 2 \times \frac{22}{7} \times 14 \right) + \left(\frac{30}{360} \times 2 \times \frac{22}{7} \times 7 \right) + 7 + 7 + 14$ $= 44 + \frac{11}{3} + 7 + 7 + 14$ $= \frac{227}{3}$</p> <p>(b) $= \left(\frac{1}{2} \times \frac{22}{7} \times 14^2 \right) + \left(\frac{30}{360} \times \frac{22}{7} \times 7^2 \right) - \left(\frac{1}{2} \times \frac{22}{7} \times 7^2 \right)$ $= 308 + \frac{77}{6} - 77$ $= \frac{1463}{6}$</p>	<p>K1K1</p> <p>N1</p> <p>K1K1</p> <p>N1</p>	<p>6</p>

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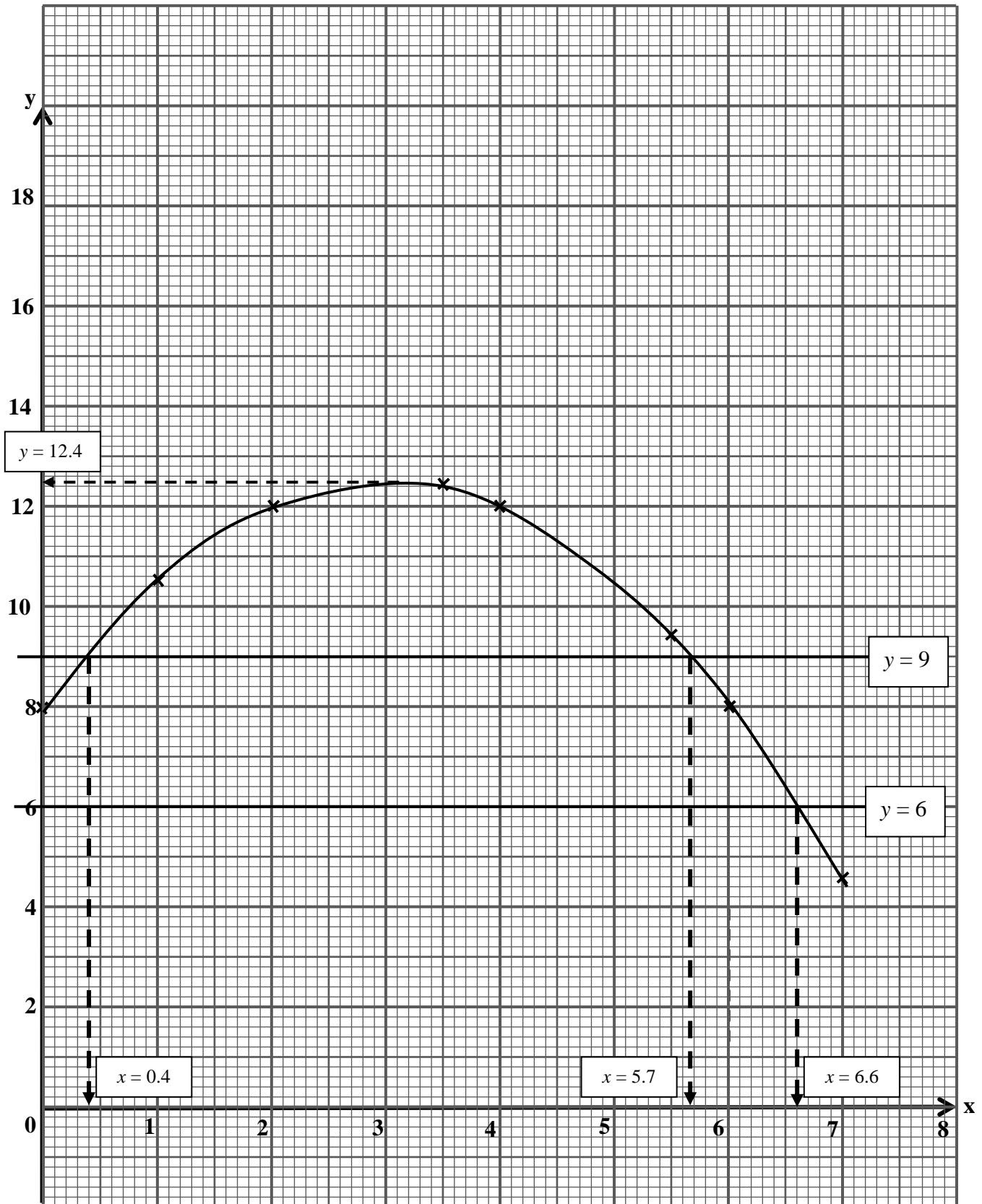
Soalan	Peraturan Permarkahan	Markah	
10	<p>(a) $\left\{ \begin{array}{l} (k, E), (k, e), (k, N), (E, k), (E, e), (E, N), (e, k), (e, E), (e, N), \\ (N, k), (N, E), (N, e) \end{array} \right\}$</p> <p>(b) i) $\{(E, k), (e, k), (N, k),\}$ $= \frac{3}{12} @ \frac{1}{4}$</p> <p>ii) $\{(E, e), (e, E)\}$ $= \frac{2}{12} @ \frac{1}{6}$</p>	<p>P2</p> <p>K1</p> <p>N1</p> <p>K1</p> <p>N1</p>	<p>6</p>
11	<p>(a) 25</p> <p>(b) $\left(\frac{1}{2} \times t \times 25\right) = \frac{1}{2}((t-10)+t)(15)$ $5t = 150$ $t = 30$</p> <p>(c) $v = \frac{0-15}{55-30}$ $v = -0.6$</p>	<p>P1</p> <p>K1</p> <p>K1</p> <p>N1</p> <p>K1</p> <p>N1</p>	<p>6</p>

Bahagian B

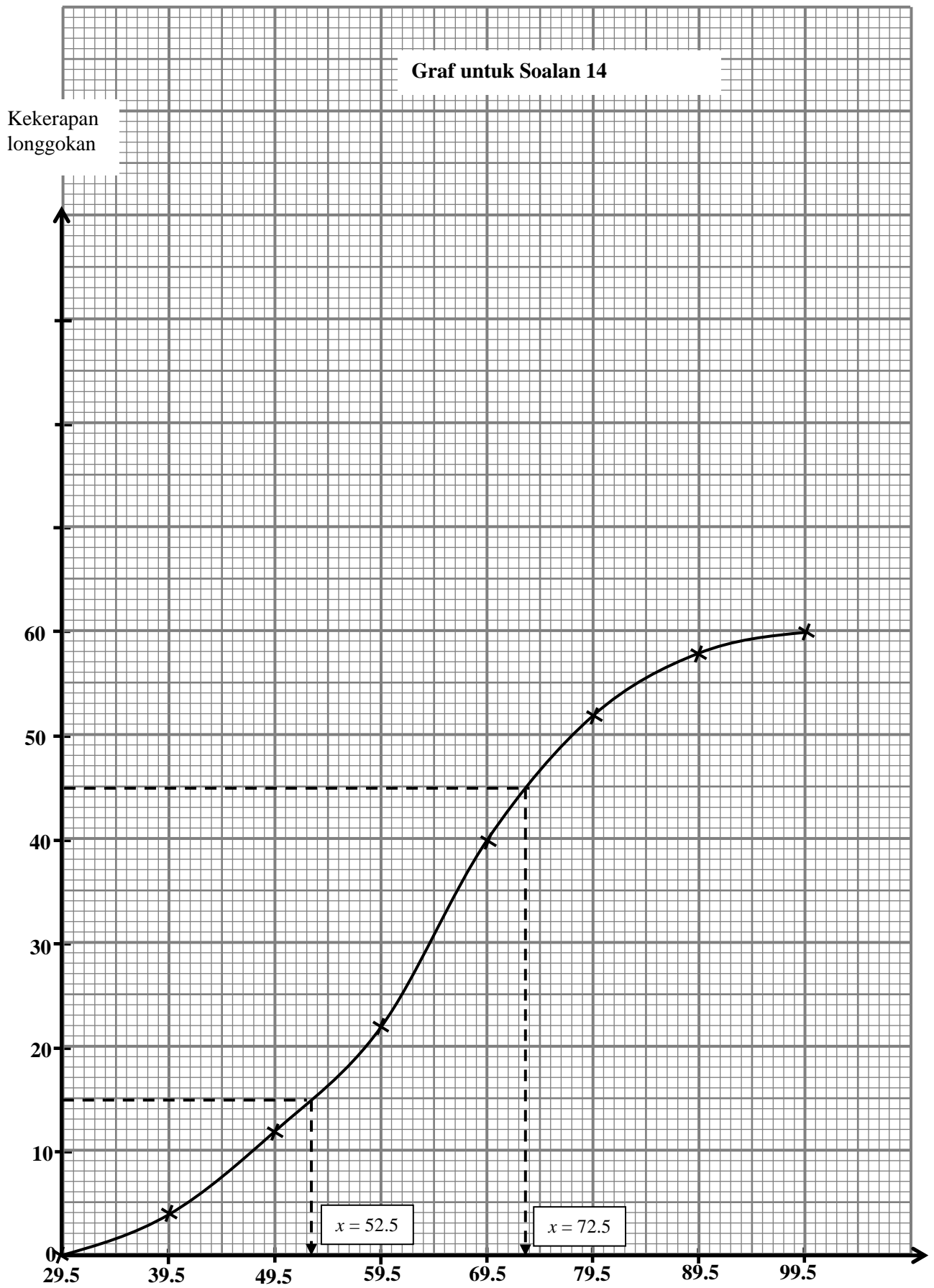
Soalan	Peraturan Permarkahan	Markah						
<p>12(a) <u>Melengkapkan Jadual</u></p> <table border="1" data-bbox="553 443 971 520" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">x</td> <td style="text-align: center;">1</td> <td style="text-align: center;">5.5</td> </tr> <tr> <td style="text-align: center;">y</td> <td style="text-align: center;">10.5</td> <td style="text-align: center;">9.4</td> </tr> </table> <p>(b) <u>Graf:</u></p> <p>Paksi dilukis dengan arah yang betul, skala seragam dalam $0 \leq x \leq 7$ dan $8 \leq y \leq 4.5$</p> <p>6 titik dan 2 titik* ditanda betul dalam $0 \leq x \leq 7$.</p> <p>Lengkung licin dan berterusan dalam $0 \leq x \leq 7$ tanpa bahagian lurus dan melalui 8 titik yang betul.</p> <p><u>Nota:</u> Jika skala lain digunakan, tolak 1 markah daripada markah KN yang diperoleh.</p> <p>(c)</p> <p>(i) $12.3 \leq y \leq 12.5$</p> <p>(ii) $0.3 \leq x \leq 0.5$ $2.55 \leq x \leq 5.70$ (2 t.p sahaja)</p> <p>(d)</p> <p>garis lurus $y = 6$ dilukis betul pada graf (semak sebarang dua titik yang diplot atau garis lurus yang melalui sebarang dua titik (x, y) yang betul).</p> <p>Nota :</p> <p>Kenal pasti persamaan garis lurus $y = 6$ beri K1</p> <p>Nilai x: $6.5 \leq x \leq 6.7$</p>	x	1	5.5	y	10.5	9.4	<p>K1K1</p> <p>P1</p> <p>K2</p> <p>N1</p> <p>4</p> <p>P1</p> <p>P1</p> <p>K2</p> <p>N1</p>	<p>2</p> <p>3</p> <p>3</p> <hr style="width: 50px; margin-left: auto; margin-right: 0;"/> <p>12</p>
x	1	5.5						
y	10.5	9.4						

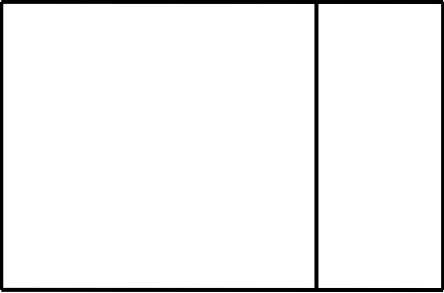
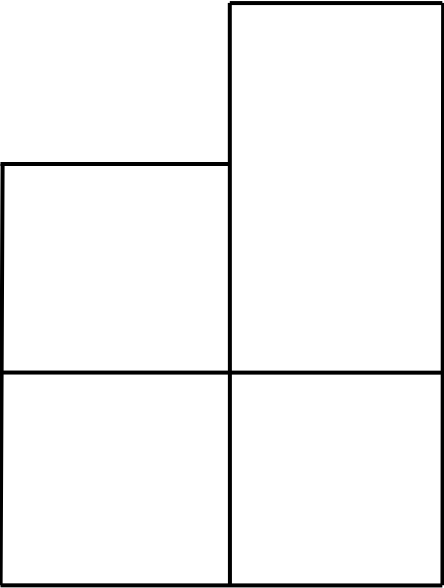
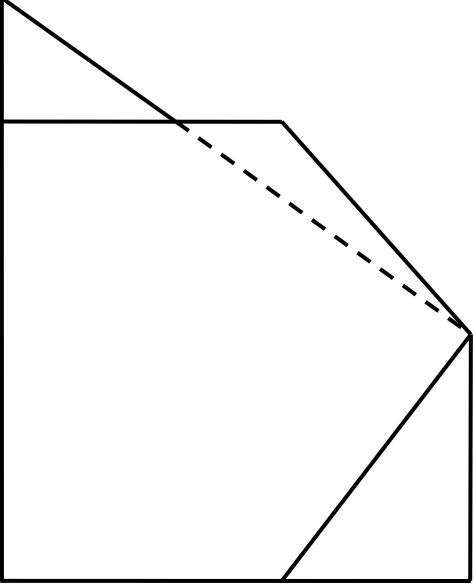
12(b)

Graph for Question 12/Graf untuk Soalan 12



Soalan	Peraturan Permarkahan	Markah																												
13(a)(i) (ii) (b)(i) a) b) (ii)	$(5, 4) \longrightarrow (4, 7)$ $(4, 1) \longrightarrow (3, 4)$ V = Putaran 90° , mengikut arah jam pada pusat (7,6) W = Pembesaran, dengan faktor skala 3, pada pusat (1, 3) $Li = Lo \times k^2$ $224 = Lo \times 2^2$ $\therefore Lo = 56$	P2 P2 P3 P3 K1 N1	4 6 $\frac{2}{12}$																											
14	(a) 60 (b) 60 – 69 (c) <table border="1" data-bbox="367 1100 1154 1667"> <thead> <tr> <th>Markah</th> <th>Sempadan Atas</th> <th>Kekerapan Longgokan</th> </tr> </thead> <tbody> <tr> <td>20 – 29</td> <td>29.5</td> <td>0</td> </tr> <tr> <td>30 – 39</td> <td>39.5</td> <td>4</td> </tr> <tr> <td>40 – 49</td> <td>49.5</td> <td>12</td> </tr> <tr> <td>50 – 59</td> <td>59.5</td> <td>22</td> </tr> <tr> <td>60 – 69</td> <td>69.5</td> <td>40</td> </tr> <tr> <td>70 – 79</td> <td>79.5</td> <td>52</td> </tr> <tr> <td>80 – 89</td> <td>89.5</td> <td>58</td> </tr> <tr> <td>90 – 99</td> <td>99.5</td> <td>60</td> </tr> </tbody> </table> (d) Rujuk Graf (e) Julat antara kuartil = $72.5 - 52.5$ $= 20$	Markah	Sempadan Atas	Kekerapan Longgokan	20 – 29	29.5	0	30 – 39	39.5	4	40 – 49	49.5	12	50 – 59	59.5	22	60 – 69	69.5	40	70 – 79	79.5	52	80 – 89	89.5	58	90 – 99	99.5	60	P1 P1 P1 P1 K2 K1 N1	2 4
Markah	Sempadan Atas	Kekerapan Longgokan																												
20 – 29	29.5	0																												
30 – 39	39.5	4																												
40 – 49	49.5	12																												
50 – 59	59.5	22																												
60 – 69	69.5	40																												
70 – 79	79.5	52																												
80 – 89	89.5	58																												
90 – 99	99.5	60																												



Soalan	Peraturan Permarkahan	Markah	
15(a)		<p>K1</p> <p>K1</p> <p>N1</p>	<p>3</p>
(b) i)		<p>K1</p> <p>K1</p> <p>N2</p>	<p>4</p>
	<p>ii)</p> 	<p>K1</p> <p>K1</p> <p>K1</p> <p>N2</p>	<p>5</p> <hr/> <p>12</p>

Soalan	Peraturan Permarkahan	Markah	
16(a)	145°B	PIP1	2
(b)	$\frac{3300}{60'} @ 55^\circ$ $55^\circ - 25^\circ$ $30^\circ S$	K1 K1 N1	3
(c)	$(180^\circ - 25^\circ - 25^\circ) \times 60'$ @ $(180^\circ - 50^\circ) \times 60'$ @ $130^\circ \times 60'$ 7800 b.n	K1 N1	2
(d)	(i) $(35^\circ + 40^\circ) \times 60' \times \cos 25^\circ$ 4078.39 b.n	K2 N1	3
	(ii) $\frac{3300 + 4078.39}{12.4}$ 595.03 knot	K1 N1	2
			<hr/> 12

SKEMA PEMARKAHAN TAMAT