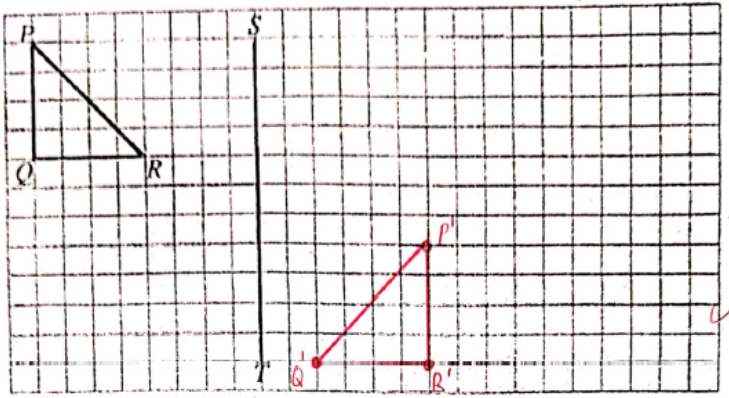
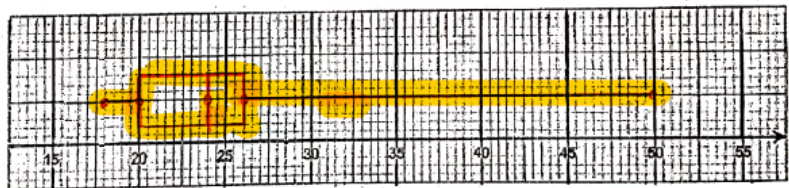
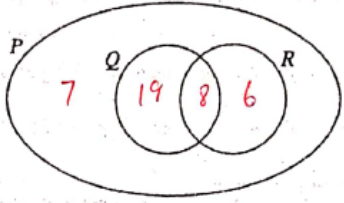


Skema Paper 2

SECTION A				
Question		Solution	Sub Mark	Mark
1		$15x + 42y = 780$ or $5x + 65y = 1025$ or $20x + 107y = 1805$	1	4
		$\begin{pmatrix} 15 & 42 \\ 5 & 65 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 780 \\ 1025 \end{pmatrix}$ Note: Refer to the equation	1	
		$X = 10$	1	
		$Y = 15$	1	
2	a	8	1	3
	b	$2(12)$	1	
		24	1	
3	a	$\frac{450000}{1000} \times RM7.49$	1	4
		3370.50	1	
	b	$\frac{120000}{1000} \times RM12.47$ or $\frac{45}{100} \times \frac{120000}{1000} \times RM3.62$ $\frac{45}{100} \times \frac{120000}{1000} \times RM3.62$	1	
		1691.88	1	
4		Khairul Hafiz $100/10.18$	1	4
		9.82	1	
		Badrul Hisham $100/10.25$	1	
		9.76	1	
5	a	HF	1	3
	b	AC	1	
	c	EG	1	
6		$8000 \times RM3.00 = 24\ 000$	1	5
		$5\% \times RM24000 = 1200$	1	
		$8000 \times RM3.30 = 26400$	1	
		$ROI = [(2400 + 1200)/24000 \times 100\%]$	1	
		15%	1	
7	a	$2^5 + 2^4 + 2^3$	1	4
		111000_2	1	
	b	$2^5 + 2^4 + 2^3 = 56$	1	
		70_8	1	
8	a	If $5k^2 + k = 252$, then $k = 7$	1	4
		If $k = 7$, then $5k^2 + k = 252$	1	
	b	$3(2)^n - 1$	1	
		$n = 1, 2, 3, \dots$	1	
9	a	$12\ ms^{-1}$	1	5
	b	$12/4$	1	
		$3\ ms^{-2}$	1	
	c	$160 = (1/2 \times 4 \times 12) + (2 \times 12) + [1/2 \times 32 \times (t-6)]$	1	
		$T = 13$	1	
10				

		x and y axis		1	3																																																															
		Correctly plotted		1																																																																
		curve		1																																																																
SECTION B																																																																				
11	a	x=-2, y = -1		1	8																																																															
		x=1, y = 2		1																																																																
	b	x and y axis		1																																																																
		5+2 points correctly plotted *award 1M for 5/6 points correctly plotted		2																																																																
		Uniform and continues graph		1																																																																
	c	5.25 ± 0.5		1																																																																
		2.50 ± 0.1		1																																																																
12	a	<table><tr><th>Markah Marks</th><th>Kekerapan Frequency</th><th>Titik tengah Midpoint</th><th>Sempadan atas Upper boundary</th><th>Kekerapan longgokan Cumulative frequency</th></tr><tr><td>21 – 30</td><td>0</td><td>25.5</td><td>30.5</td><td>0</td></tr><tr><td>31 – 40</td><td>6</td><td>35.5</td><td>40.5</td><td>6</td></tr><tr><td>41 – 50</td><td>15</td><td>45.5</td><td>50.5</td><td>21</td></tr><tr><td>51 – 60</td><td>20</td><td>55.5</td><td>60.5</td><td>41</td></tr><tr><td>61 – 70</td><td>11</td><td>65.5</td><td>70.5</td><td>52</td></tr><tr><td>71 – 80</td><td>5</td><td>75.5</td><td>80.5</td><td>57</td></tr><tr><td>81 – 90</td><td>2</td><td>85.5</td><td>90.5</td><td>59</td></tr><tr><td>91 – 100</td><td>1</td><td>95.5</td><td>100.5</td><td>60</td></tr></table>	Markah Marks	Kekerapan Frequency	Titik tengah Midpoint	Sempadan atas Upper boundary	Kekerapan longgokan Cumulative frequency	21 – 30	0	25.5	30.5	0	31 – 40	6	35.5	40.5	6	41 – 50	15	45.5	50.5	21	51 – 60	20	55.5	60.5	41	61 – 70	11	65.5	70.5	52	71 – 80	5	75.5	80.5	57	81 – 90	2	85.5	90.5	59	91 – 100	1	95.5	100.5	60			10																		
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		Cumulative frequency		1																																																																
	b	$\frac{[6(35.5) + 15(45.5) + 20(55.5) + 11(65.5) + 5(75.5) + 2(85.5) + 1(95.5)]}{6+15+20+11+5+2+1}$		2																																																																
		56.17		1																																																																
	c	x and y axis		1																																																																
		8 points plotted correctly		2																																																																
		Curve continues		1																																																																
13	a	3/7 x 3/4		1	8																																																															
		9/28		1																																																																
	b(i)	S={{(1,A), (2,A), (3,A), (4, A),(5,A), (6, A), (1,B), (2,B), (3,B), (4, B),(5,B), (6, B), (1,C), (2,C), (3,C), (4, C),(5,C), (6, C), (1,D), (2,D), (3,D), (4, D),(5,D),(6, D)}}		2																																																																
	(ii)	{{(1,A), (2,A), (3,A), (4, A),(5,A), (6, A)}}		1																																																																
		1/4		1																																																																
	(iii)	{{(1,A),(3,A),(5,A),(1,B),(3,B),(5,B),(1,C),(2,C),(3,C), (4, C),(5,C),(6, C), (1,D),(3,D),(5,D)}}		1																																																																
		5/8		1																																																																
14	a	<table><tr><th colspan="2">Income and expenditure</th><th>RM</th></tr><tr><td colspan="3">Net income</td></tr><tr><td>Net salary</td><td>4000</td><td>/m</td></tr><tr><td>Passive</td><td>1500</td><td></td></tr><tr><td colspan="3">Fixed monthly savings</td></tr><tr><td>Emergency</td><td>400</td><td>/m</td></tr><tr><td></td><td>200</td><td></td></tr><tr><td colspan="2">Income balance</td><td>4900</td></tr><tr><td colspan="3">Fixed expenses</td></tr><tr><td>Insurance</td><td>250</td><td></td></tr><tr><td>Car instalment</td><td>400</td><td>/m</td></tr><tr><td>Housing loan</td><td>1380</td><td></td></tr><tr><td colspan="2">Total</td><td>2030</td></tr><tr><td colspan="3">Variable expenses</td></tr><tr><td>Food & drinks</td><td>800</td><td></td></tr><tr><td>Car maintenance</td><td>250</td><td>/m</td></tr><tr><td>Parents</td><td>400</td><td></td></tr><tr><td>Porting fee</td><td>50</td><td></td></tr><tr><td>water, electric, telephone</td><td>100</td><td></td></tr><tr><td>Others</td><td>200</td><td></td></tr><tr><td colspan="2">Total</td><td>1800</td></tr></table>	Income and expenditure		RM	Net income			Net salary	4000	/m	Passive	1500		Fixed monthly savings			Emergency	400	/m		200		Income balance		4900	Fixed expenses			Insurance	250		Car instalment	400	/m	Housing loan	1380		Total		2030	Variable expenses			Food & drinks	800		Car maintenance	250	/m	Parents	400		Porting fee	50		water, electric, telephone	100		Others	200		Total		1800			
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		Net income	1	9
		Saving	1	
		Fixed expenses	1	
		Variable expenses	1	
		4900, 2030, 1800 correct	1	
	b	Cash flow= 4900 – 2030 - 1800	1	
		1070	1	
	c	Manage wisely	1	
		Positive cashflow/accept any suitable answer	1	
15	a(i)		2	10
	(ii)	Congruent	1	
		Same shape & size	1	
	b(i)	Enlargement	1	
		k=2	1	
		centre (1,1)	1	
	(ii)	2 ² x 90	2	
		360	1	
SECTION C				
16	a(i)	6m (2-3m)	1	15
	(ii)	(y+9)(y-9)	1	
	(iii)	(x+5), (x-3)	2	
	b(i)	Mode = 24	1	
		Median = 24	1	
		Mean =[18+20+20+24+24+24+26+26+34+50]/10	1	
		26.6	1	
	(ii)	 Min=18, Q1=20, Q2=24, Q3=26, Max=50	2	
	c(i)	103500-300-21620 =81580	1	
	(ii)	4600 or 2431.80	1	
		4600+2431.80	1	
		7031.80 – 750	1	
		RM6281.80	1	
17	a	6 x 8	1	15
		(6 x 50) x (8x 50)	1	
		300 x 400	1	
		120000	1	
		12 m ²	1	

	b	P: translation $\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ $\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ or rotation 180° at centre B	2 or 3	
		Q: rotation 180° at centre B translation $\begin{pmatrix} -2 \\ 0 \end{pmatrix}$ $\begin{pmatrix} -2 \\ 0 \end{pmatrix}$	3 or 2	
	c(i)	 Each area 1M for 7, 19, 8 and 6	4	
	(ii)	7+6=13	1	