Skema MPP 3
Matematik SPM
Kertas 1 & 2
Tahun 2026

KEMENTERIAN PENDIDIKAN MALAYSIA
Jabatan Pendidikan Negeri Terengganu

SKEMA

MPP 3 – TAHUN 2026

MATEMATIK 1449/1/2

Kertas 1 & 2

PERATURAN PEMARKAHAN

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

Peraturan Pemarkahan ini mengandungi **16** halaman bercetak

SKEMA PEMARKAHAN

MODUL PERKEMBANGAN PEMBELAJARAN 3 (MPP 3) / 2026

MATEMATIK KERTAS 1

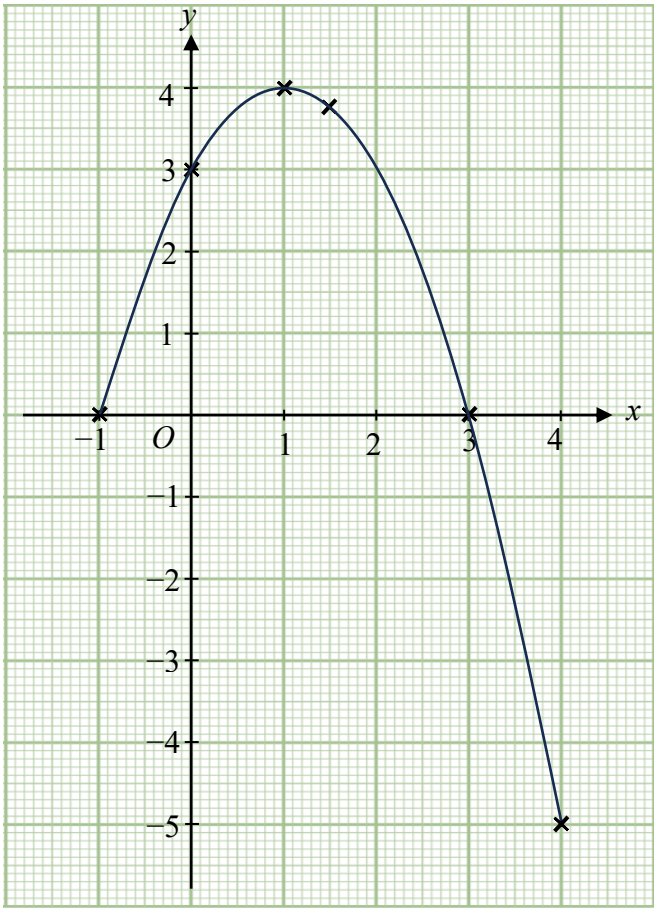
No	Jawapan	No	Jawapan	No	Jawapan	No	Jawapan
1	B	11	D	21	D	31	D
2	A	12	C	22	C	32	D
3	D	13	A	23	D	33	B
4	B	14	B	24	A	34	C
5	D	15	A	25	C	35	A
6	C	16	B	26	A	36	C
7	B	17	B	27	B	37	C
8	A	18	C	28	C	38	A
9	B	19	B	29	D	39	C
10	A	20	TIADA JAWAPAN (BONUS)	30	B	40	B

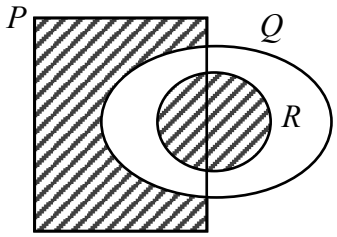
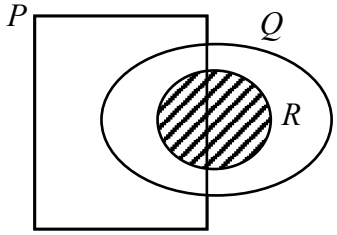
Analisis Jawapan :

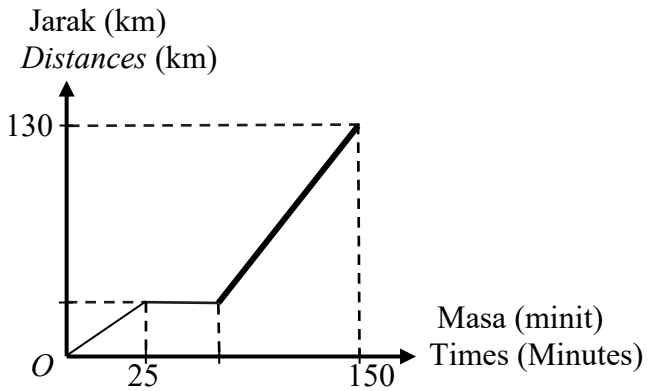
JAWAPAN	SOALAN				JUMLAH
	1-10	11-20	21-30	31-40	
A	3	2	2	2	9
B	4	4	2	2	12
C	1	3	3	4	11
D	2	1	3	2	8
					40

MATEMATIK KERTAS 2

BAHAGIAN A

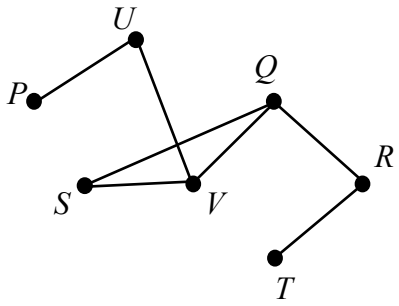
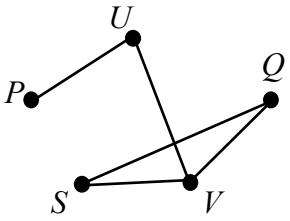
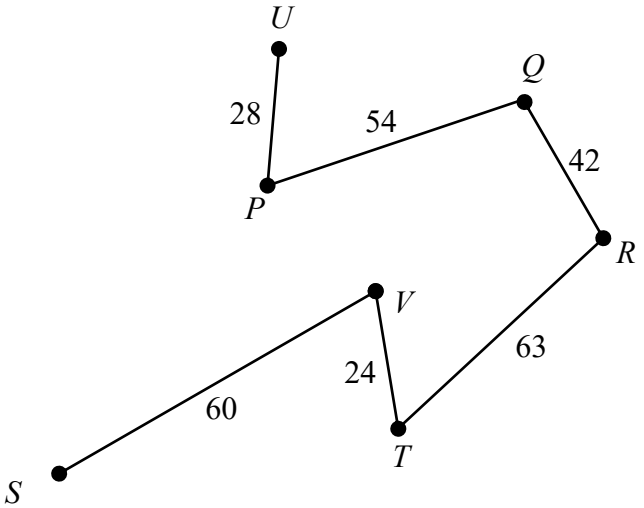
Soalan	Peraturan Permarkahan	Markah	
1 (*a*)	$p = 0$ *atau* $q = 5$ *atau* 10757_8 5	W1 V1	
(*b*)	$2434_5 + 423_5$ <u>*atau*</u> $369 + 113$ <u>*atau*</u> 482 3412 <u>*atau*</u> 3412_5	W1 V1	4
2	 Kesemua 6 titik diplot dengan betul atau lengkung melalui semua titik untuk $-1 \le x \le 4$ dan $-5 \le y \le 4$. <u>Nota</u>: 4 atau 5 titik diplot dengan betul beri W1. Lengkung yang licin dan bersambung tanpa sebarang garis lurus melalui semua 6 titik.	W2 V1	3

Soalan	Peraturan Permarkahan	Markah	
3 (*a*)	$y = 7$	**U1**	
(*b*)	$-5 = -\frac{1}{2}(2) + c$ <u>atau</u> -4 $y = -\frac{1}{2}x - 4$	**W1** **V1**	**3**
4 (*a*)	Palsu / *False*	**U1**	
(*b*)	Jika $x^2 \le 4$ maka $x \le 2$ *If* $x^2 \le 4$ *then* $x \le 2$ Benar / *True*	**U1** **U1**	
(*c*)	2^6 64	**W1** **V1**	**5**
5 (*a*)	 <u>Nota:</u>  Dilihat beri W1	**W2**	
(*b*)	$11 + 2x + 5x = 46$ <u>atau</u> setara 5	**W1** **V1**	**4**

Soalan	Peraturan Permarkahan	Markah	
6 (*a*)	Ansuran pinjaman perumahan <u>*atau*</u> Ansuran pinjaman kereta <u>*atau*</u> Premium Insurans *Housing loan instalment* <u>*or*</u> *Car loan instalment* <u>*or*</u> *Insurance Premiums*	**U1**	
(*b*)	$(5300+500)-1800-1700-350-500-380-900$ <u>*atau*</u> 170	**W1**	
	<u>*atau*</u> $(5000+1000)-1500-1350-500-440-480-800$ <u>*atau*</u> 930	**W1**	
	Cikgu Ho	**V1**	
	Aliran tunai positif Cikgu Ho lebih tinggi / lebih baik (930 > 170).	**V1**	**5**
7	$\frac{70}{100}\times 450000$ <u>*atau*</u> 315000	**W1**	
	$\left(\frac{300000}{*315000}\times 47000\right)-2000$	**W1**	
	42761.90	**V1**	**3**
	Nota: Terima jawapan akhir 2 t.p sahaja		
8 (*a*) (i)	$p = 20$	**U1**	
	$q = 55$	**U1**	
(ii)		**W1**	
(*b*)	$\frac{130}{\left(\frac{150}{60}\right)}$ <u>*atau*</u> setara	**W1**	
	52	**V1**	**5**

Soalan	Peraturan Permarkahan	Markah	
9 (*a*)	3	**U1**	
(*b*)	$y = 3\text{ kos } 15\,(4) + 4$ $= 5.5$	**U1** **V1**	
(*c*)	$y = 3\text{kos } 15x + 3$	**U1**	**4**
10 (*a*)	$\{46, 66, 96\}$ $\frac{3}{12} @ \frac{1}{4}$ ATAU $\{14, 16, 54, 56, 64, 66, 94, 96,\}$ $\frac{8}{12} @ \frac{2}{3}$	**W1** **V1**	
(*b*)	$\{41, 49, 61, 65\}$ $\frac{4}{12} @ \frac{1}{3}$ ATAU $\{14, 16, 56, 94\}$ $\frac{4}{12} @ \frac{1}{3}$	**W1** **V1**	**4**

BAHAGIAN B

Soalan	Peraturan Permarkahan	Markah	
11 (*a*) (i)	$\{P,Q,R,S,T,U,V\}$	U1	
(ii)	4	U1	
(iii)	 <u>*atau*</u>  <u>*atau*</u> setara	W1 W1	4
(*b*)(i)	3	U1	
(ii)	 <u>Nota:</u> 1. Lukisan tanpa pemberat – beri W1 2. Graf terarah beri W1	W2	
	28+54+42+63+24+60	W1	
	271	V1	5
	<u>Nota:</u> **Terima** tanpa kerja beri W1V1		9

Soalan	Peraturan Permarkahan	Markah	
12 (*a*)			

	Titik tengah *Midpoint*	Kekerapan longgokan *Cumulative frequency*	Kekerapan *Frequency*
I	27	0	0
II	32	3	3
III	37	8	**5**
IV	42	15	**7**
V	47	25	10
VI	52	34	9
VII	57	38	4
VIII	62	40	2

II – VII semua betul untuk titik tengah **U1**
II – VII semua betul untuk kekerapan longgokan **U1**
II – VII semua betul untuk kekerapan **U1**
3

(*b*) Rujuk graf pada halaman 9

Kedua-dua paksi dilukis dalam arah yang betul dengan skala seragam untuk $27 \le x \le 67$ dan $0 \le y \le 10$. **U1**

*9 titik diplot dengan betul. ~~menggunakan nilai titik tengah~~ **W2**

Nota:
*7 atau *8 titik diplot dengan betul, beri W1

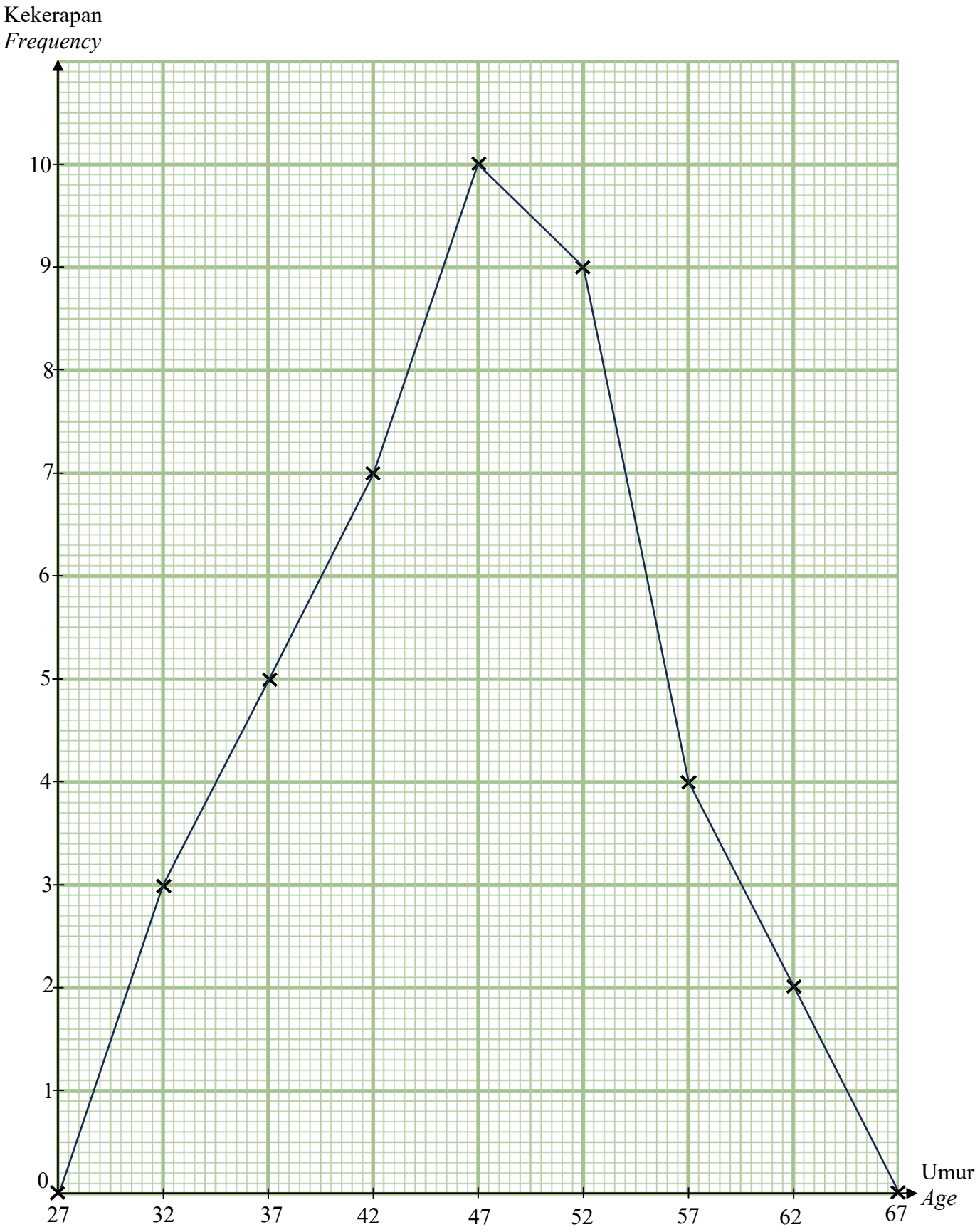
Poligon kekerapan yang betul. ~~menggunakan skala yang diberi~~ **V1**
4

(*c*) $\dfrac{(32)(3)+(37)(5)+(42)(7)+(47)(10)+(52)(9)+(57)(4)+(62)(2)}{40}$ **W2**

Nota:
Terima 2 kesilapan daripada kekerapan × titik tengah untuk W1

$\dfrac{373}{8}$ *atau* 46.63 **V1**
3

10

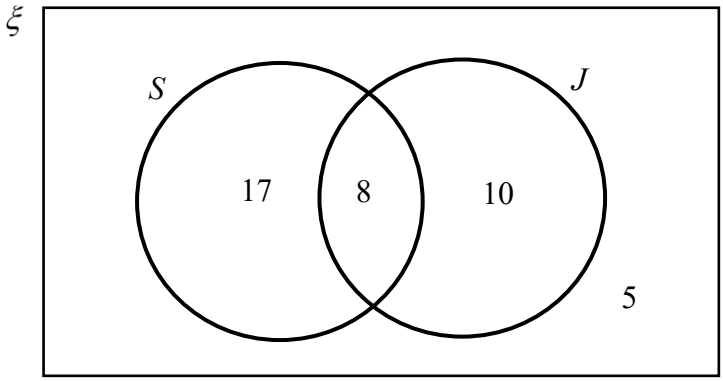
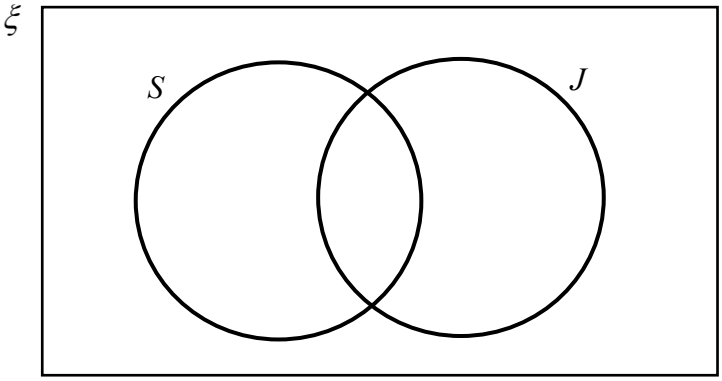
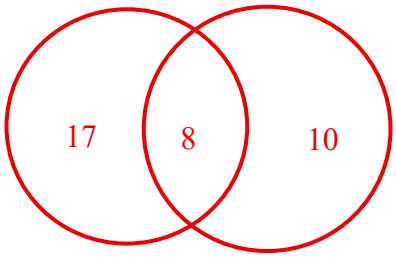

Kekerapan
Frequency
10
9
8
7
6
5
4
3
2
1
0
27
32
37
42
47
52
57
62
67
Umur
Age

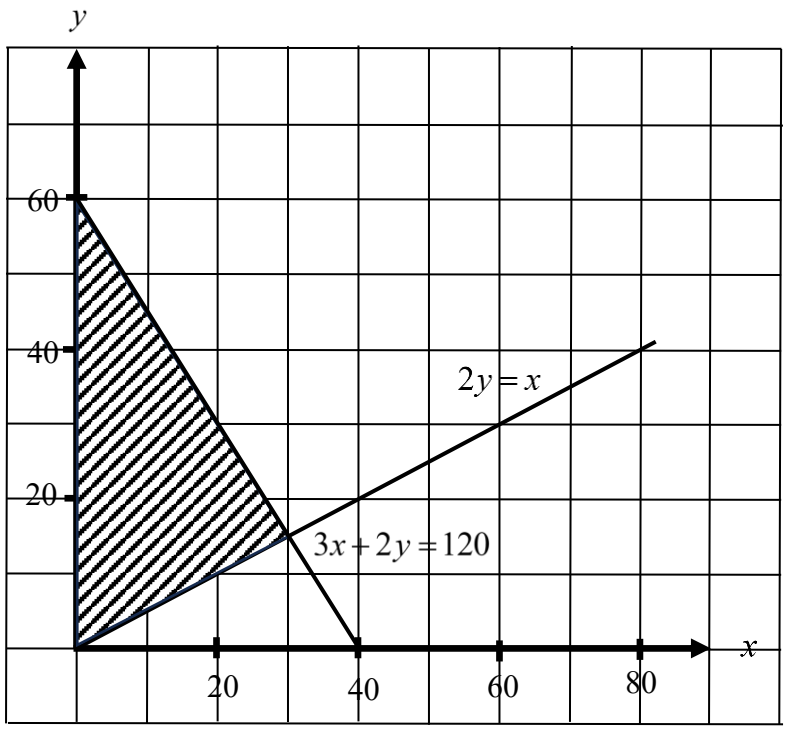
Soalan	Peraturan Permarkahan	Markah	
13 (*a*) (i)	$\begin{bmatrix} 2 & 3 \\ -3 & -1 \end{bmatrix}$	**U1**	**1**
(ii)	Tidak Penentu = 0 *atau* setara	**U1** **U1**	**2**
(*b*)	$x + y = 12$ *atau* $4.3x + 3.5y = 44.4$ *atau* setara	**U1**	
	$\begin{bmatrix} 1 & 1 \\ 4.3 & 3.5 \end{bmatrix}\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 12 \\ 44.4 \end{bmatrix}$ *atau* setara	**U1**	
	$\dfrac{1}{1(3.5) - 1(4.3)}\begin{bmatrix} 3.5 & -1 \\ -4.3 & 1 \end{bmatrix}\begin{bmatrix} 12 \\ 44.4 \end{bmatrix}$ *atau* setara	**W1**	
	Nota: 1. $\begin{bmatrix} \text{matriks} \\ \text{songsang} \end{bmatrix}\begin{bmatrix} 12 \\ 44.4 \end{bmatrix}$ beri U1 2. Jangan terima $\begin{bmatrix} \text{matriks} \\ \text{songsang} \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ *atau* $\begin{bmatrix} \text{matriks} \\ \text{songsang} \end{bmatrix} = \begin{bmatrix} 1 & 1 \\ 4.3 & 3.5 \end{bmatrix}$		
	$x = 3$ $y = 9$	**V1** **V1**	**5**
~~(*c*)~~	~~1 : 3~~	~~V1~~	~~1~~
			8

Soalan	Peraturan Permarkahan	Markah	
14 (*a*)	9 000 + 7 000 + 1 200 + 2 800	**W1**	
	20 000	**V1**	
(*b*)	84 400 – 300 – 9 000 – 7 000 – 1 200 – 2 800 <u>*atau*</u> setara	**W1**	
	64 100	**VI**	
(*c*)	$1\,500+\left[(64\,100-50\,000)\times\frac{11}{100}\right]-600$ <u>*atau*</u> setara	**W2**	
	<u>Nota</u> : $1\,500+\left[(64\,100-50\,000)\times\frac{11}{100}\right]$ <u>*atau*</u> setara beri W1		
	2 451	**V1**	
(*d*)	450×12 <u>*atau*</u> 5 400 dilihat	**W1**	
	Tidak perlu, jumlah PCB melebihi jumlah cukai pendapatan yang perlu dibayar / *No, the PCB amount exceeds the amount of income tax payable*	**V1**	**9**

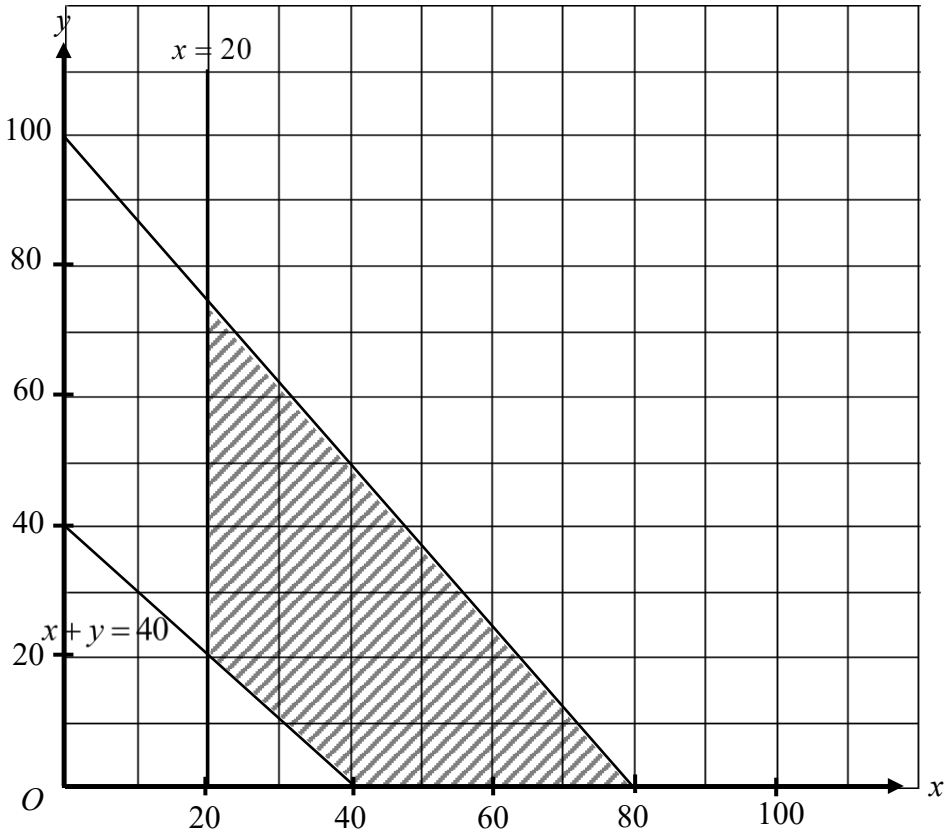
Soalan	Peraturan Permarkahan	Markah	
15 (*a*)	(i) (7, 4)	**U1**	
	(ii) (12, 8)	**U1**	
(*b*)	(i) 180° pada pusat (0, 1) 180° *at centre* (0, 1) Nota / *Note* : 180° <u>*atau*</u> pada pusat (0, 1), beri U1 180° <u>*or*</u> *at centre* (0, 1), *give* U1	**U2**	
	(ii) Pembesaran dengan faktor skala 2 pada pusat *I* / (1, 4) *Enlargement, scale factor* 2, *at centre I* / (1, 4) Nota / *Note* : 1. Pembesaran, faktor skala 2 <u>*atau*</u> Pembesaran berpusat di *I* / (1, 4), beri U2 *Enlargement, scale factor* 2 <u>*or*</u> *Enlargement, centre I* / (1, 4), *give* U2 2. Pembesaran, beri U1 *Enlargement,* *give* U1	**U3**	
(*c*)	Tidak, kerana pola bagi bentuk tidak berulang. *No, because the pattern for the form is not repeatable* Nota / *Note* : Tidak, beri U1 *No*, *give* U1	**U2**	**9**

BAHAGIAN C

Soalan	Peraturan Permarkahan	Markah	
16 *(a)* (i)		**W2**	
	Nota : 		
	Terima rajah tanpa bilangan unsur beri W1 **atau** 		
(ii)	5	**V1**	**3**
(b) (i)	$(x+2)(x-3)=24$ $x^2-x-30=0$	**W1** **V1**	
(ii)	$(x+5)(x-6)=0$ ~~panjang =~~ 8	**W1** **V1**	**4**

(*c*)	$\frac{3(1)+5(2)+8(3)+2(4)+4(5)}{22}$ $\frac{65}{22}$ *atau* 2.95	W1 V1	
	$\sqrt{\frac{3(1)^2+5(2)^2+8(3)^2+2(4)^2+4(5)^2}{22}-2.95^2}$ $1.26-1.27$	W1 V1	4
(*d*) (i)	$3x+2y\le 120$ *atau* setara $2y\ge x$ *atau* setara	W1 W1	
(ii)			
	Garis $3x+2y=120$ dilukis dengan betul Rantau dilorek dengan betul	W1 V1	4
			15

Soalan	Peraturan Permarkahan	Markah	
17 *(a)* (i)	$\frac{2}{5}\times 200$	**W1**	
	80	**V1**	
(ii)	$\frac{3}{2}$ *atau* 1.5	**V1**	**3**
(b) (i)	$\frac{388080}{70}$	**W1**	
	5544	**V1**	
(ii)	$\sqrt{\frac{5544}{\left(\frac{22}{7}\right)}}$	**W1**	
	42	**V1**	**4**
(c) (i)	$(2x+1)(x+5)=110$	**W1**	
	$2x^2+11x-105=0$	**V1**	
(ii)	$(2x+21)(x-5)=0$	**W1**	
	11	**V1**	**4**
(d) (i)	$5x+4y\le 400$	**W1**	
(ii)	Lihat Graf di halaman 16		
	Garis $5x+4y=400$ dilukis dengan betul	**W1**	
	Rantau dilorek dengan betul	**V1**	
(ii)	310	**V1**	**4**
			15



SKEMA PEMARKAHAN TAMAT