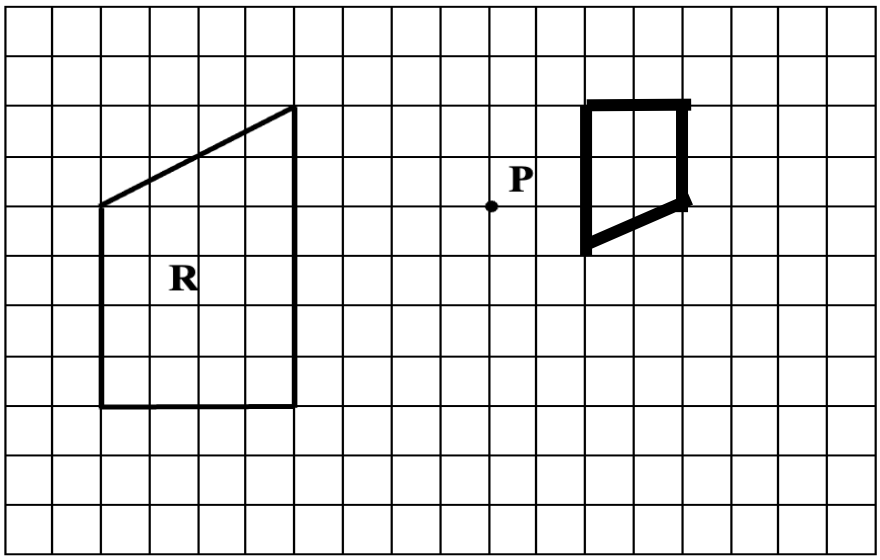
PEMATUHAN PEMARKAHAN
PERCUBAAN SIJIL PELAJARAN MALAYSIA
TAHUN 2025
MATEMATIK KERTAS 2
1449/2

Bahagian	Soalan	Markah Penuh
A	**1**	4
	2	3
	3	4
	4	5
	5	4
	6	5
	7	3
	8	6
	9	3
	10	3
B	**11**	10
	12	7
	13	9
	14	9
	15	10
C	**16**	15
	17	15

Soalan		Pematuhan Pemarkahan		
1	(a)	i Sebilangan / Some ii Sebilangan / Some	P1 P1	
	(b)	Sah dan munasabah / Valid and sound	P1P1	4
2	(a)	25	N1	
	(b)	$\frac{45 + 50 + 55 + 60 + 60 + 60 + 65 + 65 + 70 + 70}{10}$	K1	
		60	N1	3
3	(a)	74	N1	
	(b)	i $\frac{8}{15}$ atau setara	N1	
		ii $\sqrt{30^2 + 16^2}$ atau 34	K1	
		$\frac{8}{17}$ atau setara	N1	3
4	(a)	$2184.83 - \left(\frac{45}{100} \times 2184.83\right)$ Nota : $\frac{75}{100} \times 2913.10$ beri K1	K2	
		1201.66	NI	
	(B)	$151.20 - \left(\frac{45}{100} \times 151.20\right)$	K1	
		83.16	N1	5

Soalan		Pematuhan Pemarkahan		
5	(a)	6	P1	
	(b)	6	P1	
	(c)	$\frac{-\left(-\frac{9}{5}\right)}{2\left(-\frac{3}{5}\right)}$	K1	
		$-\frac{3}{2}$ atau setara	N1	4
6	(a)	3	P1	
	(b)	$\begin{pmatrix}3 & -2\\ 2 & 1\end{pmatrix}\begin{pmatrix}x\\ y\end{pmatrix}=\begin{pmatrix}8\\ 10\end{pmatrix}$	P1	
		$\frac{1}{3(1)-(-2)(2)}\begin{pmatrix}1 & 2\\ -2 & 3\end{pmatrix}\begin{pmatrix}8\\ 10\end{pmatrix}$	K1	
		$x=4$	N1	
		$y=2$	N1	
		Nota: 1. $\begin{pmatrix}x\\ y\end{pmatrix}=\begin{pmatrix}4\\ 2\end{pmatrix}$ *sebagai jawapan akhir, beri* $N1$ 2. Jangan terima sebarang penyelesaian yang tidak menggunakan kaedah matriks.		4
7	(a)	5	P1	
	(b)	$\{(A,B),(B,B),(B,C),(C,D),(D,C),(D,E),(E,A)\}$	P2	3

Soalan		Pematuhan Pemarkahan		
8	(a)	$\frac{1}{4}$, $\frac{1}{2}$	P1P1	
	(b)	i $\frac{1}{8}$	N1	
		ii $\left(\frac{2}{5} \times \frac{3}{4}\right) + \left(\frac{1}{5} \times \frac{1}{8}\right) + \left(\frac{2}{5} \times \frac{1}{8}\right)$	K2	
		Nota: $\left(\frac{2}{5} \times \frac{3}{4}\right) atau \left(\frac{1}{5} \times \frac{1}{8}\right) atau \left(\frac{2}{5} \times \frac{1}{8}\right)$ beri K1		
		$\frac{3}{8}$	N1	6
9	(a)	30	P1	
	(b)	$\frac{200}{3}$	K1	
		66.67	N1	3
10		$\left(\frac{22}{7} \times 14 \times 14 \times 27\right) - \left(\frac{4}{3} \times \frac{22}{7} \times 7 \times 7 \times 7\right)$	K2	
		Nota : $\left(\frac{22}{7} \times 14 \times 14 \times 27\right)$ atau $\left(\frac{4}{3} \times \frac{22}{7} \times 7 \times 7 \times 7\right)$ beri K1		
		$\frac{45584}{3}$ atau setar	N1	

No Soalan		Pematuhan Pemarkahan		
11	(a)	$(-2\ ,3)$	P1	
	(b)		N2	
	(c)	i W = Pembesaran, $faktor\ skala\ \frac{3}{2}$, pada pusat titik E	P3	
		Nota : 1. Pembesaran, $faktor\ skala\ \frac{3}{2}$, beri P2 2. Pembesaran, pada pusat titik E beri P2 3. Pembesaran beri P1		
		V = Pantulan pada garis x = -2	P2	
		Nota : 1. Pantulan beri P1		
		ii $125 + \left(\frac{125}{\left(\frac{3}{2}\right)^2 - 1}\right)$ atau setara	K1	
		225	N1	10

<table>
<tr><th colspan="2">No Soalan</th><th>Pematuhan Pemarkahan</th><th></th><th></th></tr>
<tr><td>12</td><td>(a)</td><td>300×0.35</td><td>K1</td><td></td></tr>
<tr><td></td><td></td><td>105</td><td>N1</td><td></td></tr>
<tr><td></td><td>(b)</td><td>$\frac{5}{100} \times (1800 \times 12)$</td><td>K1</td><td></td></tr>
<tr><td></td><td></td><td>1080</td><td>N1</td><td></td></tr>
<tr><td></td><td>(c)</td><td>$\frac{106}{100} \times harga\ asal = 13.80\ atau\ \frac{106}{100} \times harga\ asal = 9.80$</td><td>K1</td><td></td></tr>
<tr><td></td><td></td><td>$Nasi\ lemak = 12.02$</td><td>N1</td><td></td></tr>
<tr><td></td><td></td><td>$Kopi = 9.25$</td><td>N1</td><td>7</td></tr>
<tr><td>13</td><td>(a)</td><td>
<table>
<tr><th></th><th>Selang kelas
Class interval</th><th>Kekerapan
Frequency</th><th>Kekerapan longgokan
Cumulative frequency</th><th>Sempadan atas
Upper boundary</th></tr>
<tr><td>I</td><td>17 – 21</td><td>0</td><td>0</td><td>21.5</td></tr>
<tr><td>II</td><td>22 – 26</td><td>4</td><td>4</td><td>26.5</td></tr>
<tr><td>III</td><td>27 – 31</td><td>16</td><td>20</td><td>31.5</td></tr>
<tr><td>IV</td><td>32 – 36</td><td>20</td><td>40</td><td>36.5</td></tr>
<tr><td>V</td><td>37 – 41</td><td>18</td><td>58</td><td>41.5</td></tr>
<tr><td>VI</td><td>42 – 46</td><td>14</td><td>72</td><td>46.5</td></tr>
<tr><td>VII</td><td>47 – 51</td><td>6</td><td>78</td><td>51.5</td></tr>
<tr><td>VIII</td><td>52 – 56</td><td>2</td><td>80</td><td>56.5</td></tr>
</table>
Nota
Kekerapan : I hingga VII

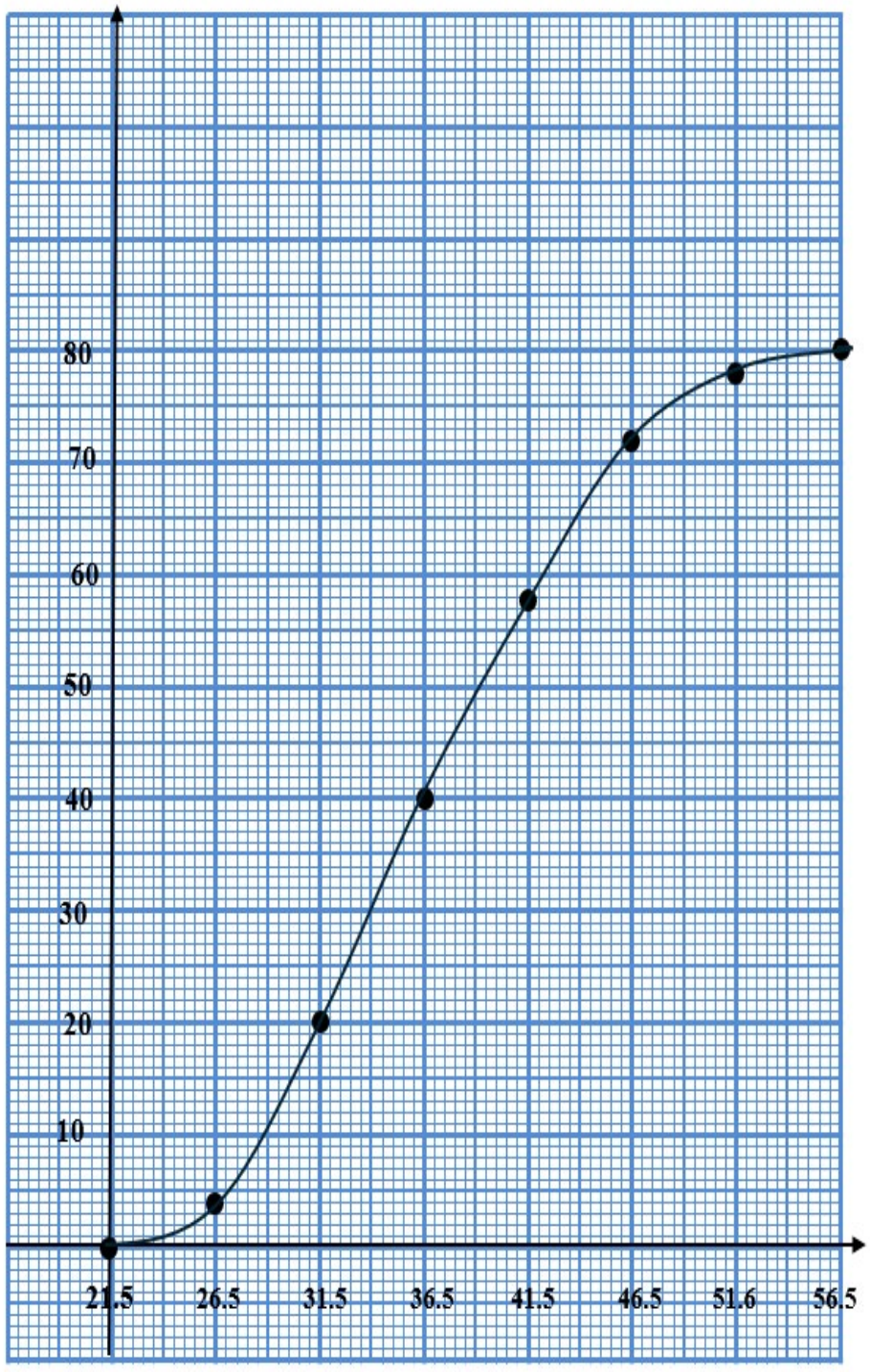
Kekerapan longgokan : I hingga VIII

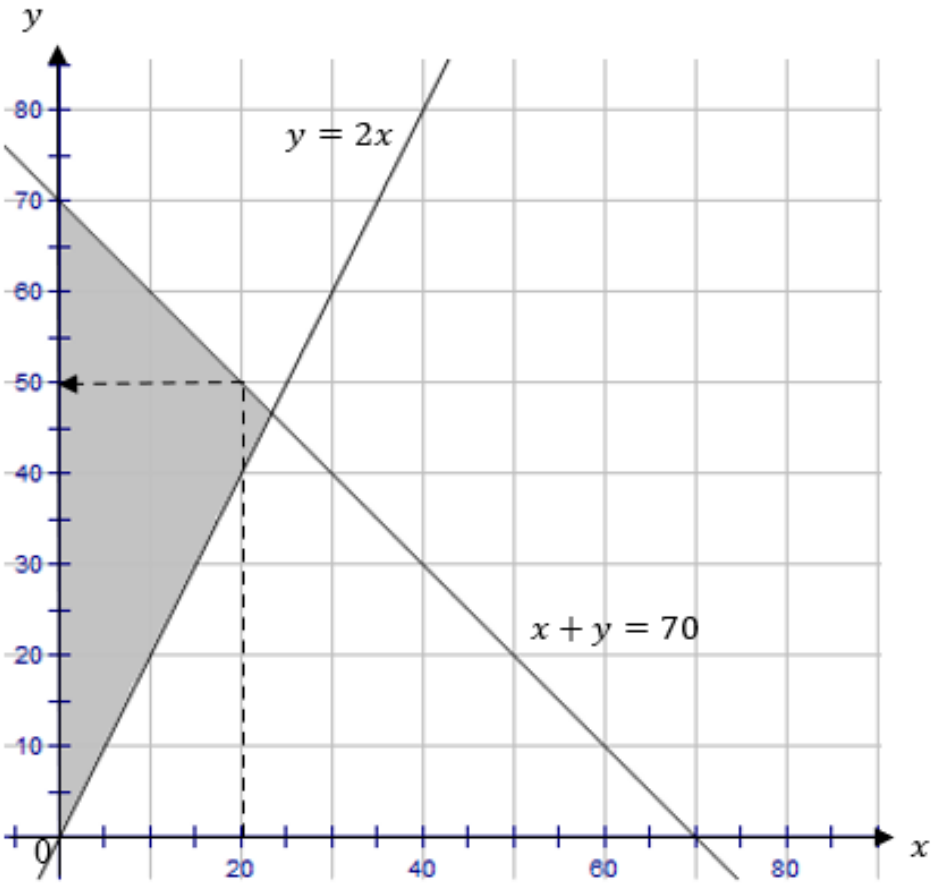
<u>Nota :</u>
Kekerapan longgokan I hingga VII beri P1

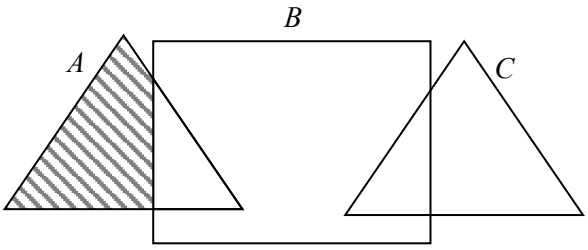
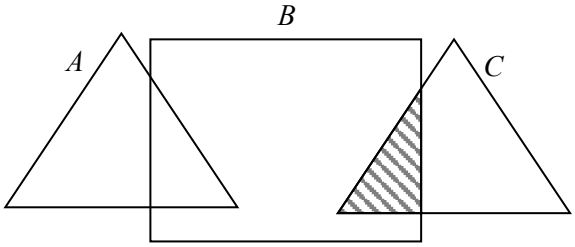
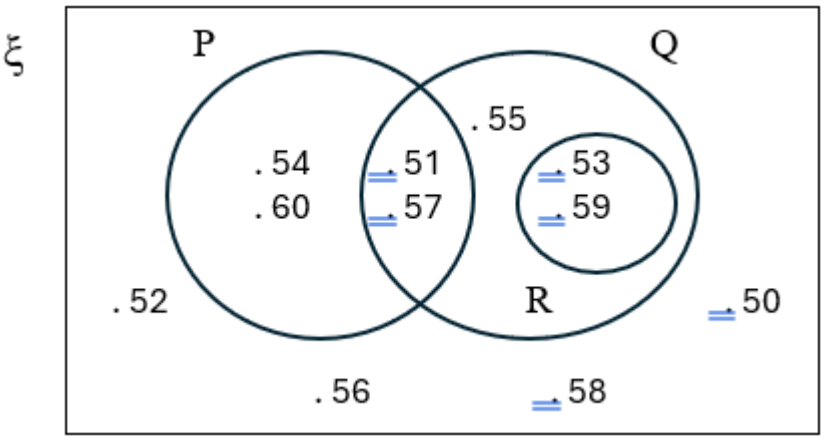
Sempadan atas : I hingga VIII
</td><td>P1

P2

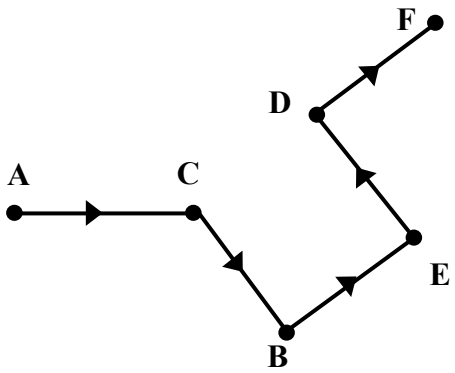
P1</td><td></td></tr>
</table>

Soalan		Pematuhan Pemarkahan		
	(b)			
		Nota $Paksi - x:\ 21.5 \leq x \leq 56.5\ dan\ paksi - y:\ 0 \leq y \leq 80$ I – VIII titik* diplot dengan tepat Graf menyambungkan semua titik	P1 K2 N1	
	(c)	38.5	N1	9

Soalan		Pematuhan Pemarkahan		
14	(a)	$x \leq 6$	P1	
		$y < x + 7$	P1	
	(b)		P1	
		$y \geq 2x$	P1	
				
		Nota *Paksi − x dan paksi − y dilukis mengikut skala* $x + y \leq 70$ *dan* $y < x + 7$ dilukis dengan betul Rantai lorekan betul	P1 K2 N1	
	(c)	50	N1	9

Soalan			Pematuhan Pemarkahan		
15	(a)	i		P1	
		ii		P2	
	(b)	i	{53, 59}	P1	
		ii	 Nota Set P dan Set Q atau Set Q dan Set R dilukis betul beri P1	P3	
		iii	{51, 54, 55, 57, 60}	N2	
		iv	5	N1	9

No Soalan		Pematuhan Pemarkahan			
16	(a)	i	20	K1	
			$\frac{20Q}{R}$	N1	
		ii	$400 = \frac{20Q}{20}$	K1	
			400	N1	
	(b)	i	$\frac{(6 \text{ X } 123) + (9 \text{ X } 128) + (13 \text{ X } 133) + (18 \text{ X } 138) + (14 \text{ X } 143) + (10 \text{ X } 148)}{70}$	K1	
			136.93	N1	
		ii	$\frac{(6 \text{ X } 123^2) + (9 \text{ X } 128^2) + (13 \text{ X } 133^2) + (18 \text{ X } 138^2) + (14 \text{ X } 143^2) + (10 \text{ X } 148^2)}{70} - 136.92^2$	K1	
			$varians = 54.92$	N1	
			$sisihan\ piawai = 7.411$	N1	
	(c)		$y = 3x\ atau\ x = y\ atau\ 3y - z = 3\ atau$ $240x + 720y + 360z = 5040\ atau\ 960y + 360z = 540\ setara$	P1	
			$960y + 360\ (3y - 3) = 540$ atau setara Terima kaedah penggantian / penghapusan / matriks	K1	
			$x = 3$	N1	
			$z = 6$	N1	
	(d)	i	333 dilihat	K1	
		ii	$Tidak\ mencukupi$	N1	15

No Soalan		Pematuhan Pemarkahan			
17	(a)	i			
			Semua tepi dilukis dengan betul dan tepat Nota Tepi dilukis dengan betul tanpa arah beri K1	N2	
		ii	$3.5 + 5 + 5.1 + 4 + 5.3$	K1	
			22.9	N1	
	(b)		$[(1 \text{ X } 4^5) + (2 \text{ X } 4^4) + (2 \text{ X } 4^3) + (3 \text{ X } 4^2)]$ atau $[(3 \text{ X } 7^3) + (5 \text{ X } 7^2) + (5 \text{ X } 7^1) + (4 \text{ X } 7^0)]$ atau 1776 atau 1313	K1	
			$[(1 \text{ X } 4^5) + (2 \text{ X } 4^4) + (2 \text{ X } 4^3) + (3 \text{ X } 4^2)] -$ $[(3 \text{ X } 7^3) + (5 \text{ X } 7^2) + (5 \text{ X } 7^1) + (4 \text{ X } 7^0)]$ atau setara	K1	
			463	N1	
	(c)		114 200 dilihat	P1	
			$\dfrac{(124\,200 - 10\,000) + \left((124\,200 - 10\,000)\ X\ \frac{2.24}{100}\ X\ 9\right)}{12 \text{ X } 9}$	K2	
			Nota $\left((124\,200 - 10\,000)\ X\ \frac{2.24}{100}\ X\ 9\right)$ beri K1		
			1 270.58	N1	
	(d)		$90\,200 - (9\,000 + 7\,000 + 2\,200 + 1\,250 + 2\,000)$	K1	
			$1\,800 + (18\,750\ X\ 14\%) - 405$ atau setara	K2	
			Nota $(18\,750\ X\ 14\%)$ atau setara beri K1		
			4 020	N1	
					15