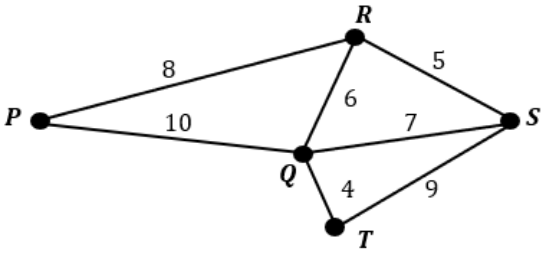
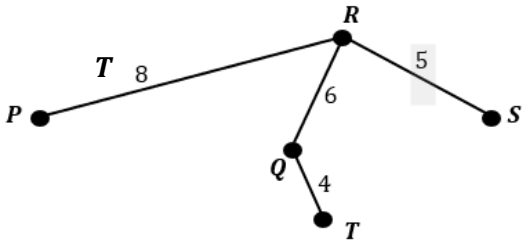
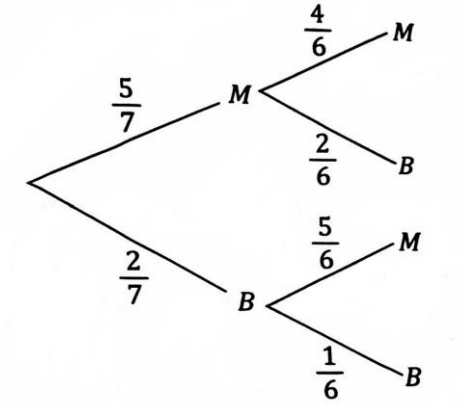
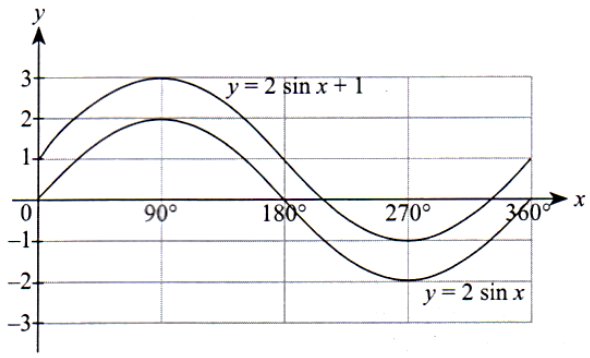
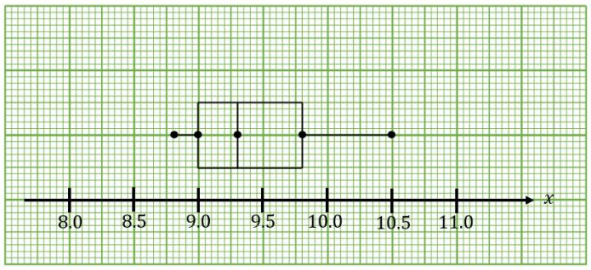
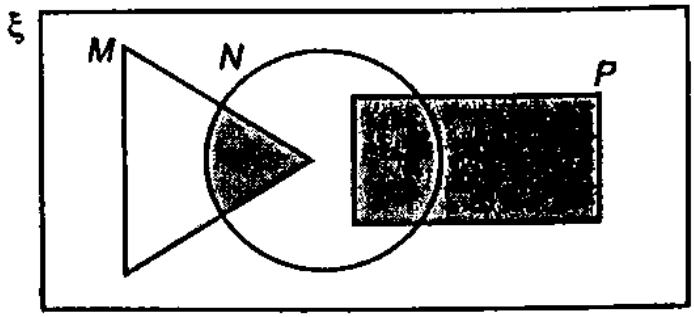
SKEMA PERMARKAHAN UJIAN PERCUBAAN SPM 2025

MATEMATIK KERTAS 2

BAHAGIAN A			
Soalan		**Cadangan Jawapan**	**Markah**
1	(a)	 Tepi-1m, Pemberat-1m	2
	(b)	 Tepi-1m, Pemberat-1m	2
2	(a)	 1 atau 2 kesalahan – 1 m Lebih dari 2 kesalahan – 0 m	2
	(b)	$\left(\frac{5}{7}\times\frac{2}{6}\right)+\left(\frac{2}{7}\times\frac{1}{6}\right)$ $\frac{2}{7}$	1 1

3			1
		Amplitud ialah 2 / A*mplitude* 2	1
		x bagi nilai maksimum = 90^o / x *for maximum value* 90^o	1
		x bagi nilai minimum = 270^o / x *for minimum value* = 270^o	1
4		$\text{RM}52\,000 - (\text{RM}9\,000 + \text{RM}5\,000 + \text{RM}2\,500)$	2
		RM35 500	1
		Tidak layak. Pendapatan bercukainya melebihi RM35 000	1
		Not eligible. His chargeable income exceeds RM35 000	

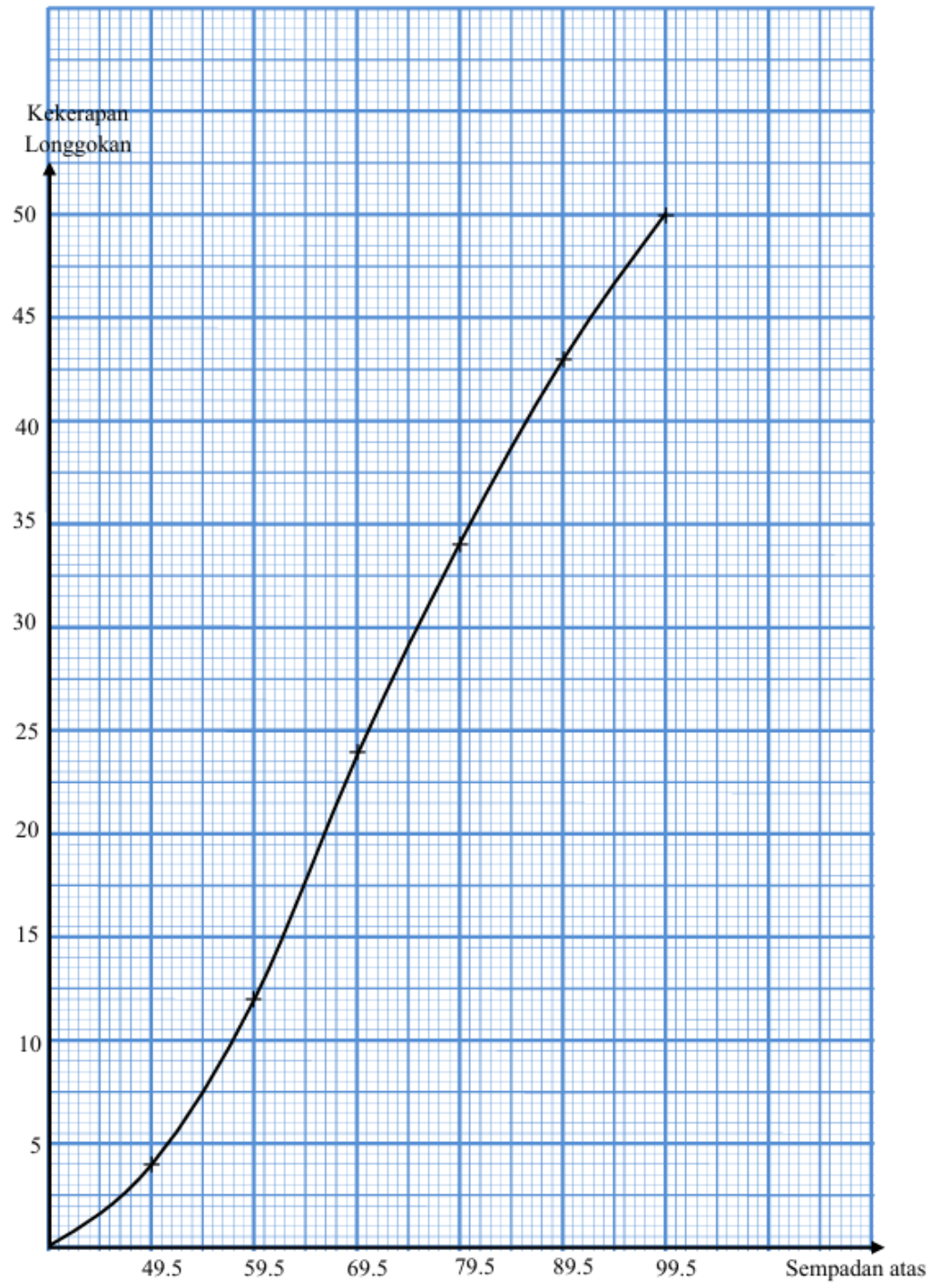
5	(a)	$\frac{0-15}{12} = -\frac{15}{12} = -1.25\ ms^{-2}$	1
	(b)	$\left[\frac{1}{2}(v+15)10\right] + (15\times 8) + \left(\frac{1}{2}\times 12\times 15\right) = 375$	2
		$5v + 75 + 120 + 90 = 375$	
		$5v = 90$	
		$v = 18$	1
6		x = 9.1	1
			
		Nilai minimum dan maksimum	1
		Median, Kuartil 1 dan kuartil 3	1
		Plot kotak dilukis betul	1

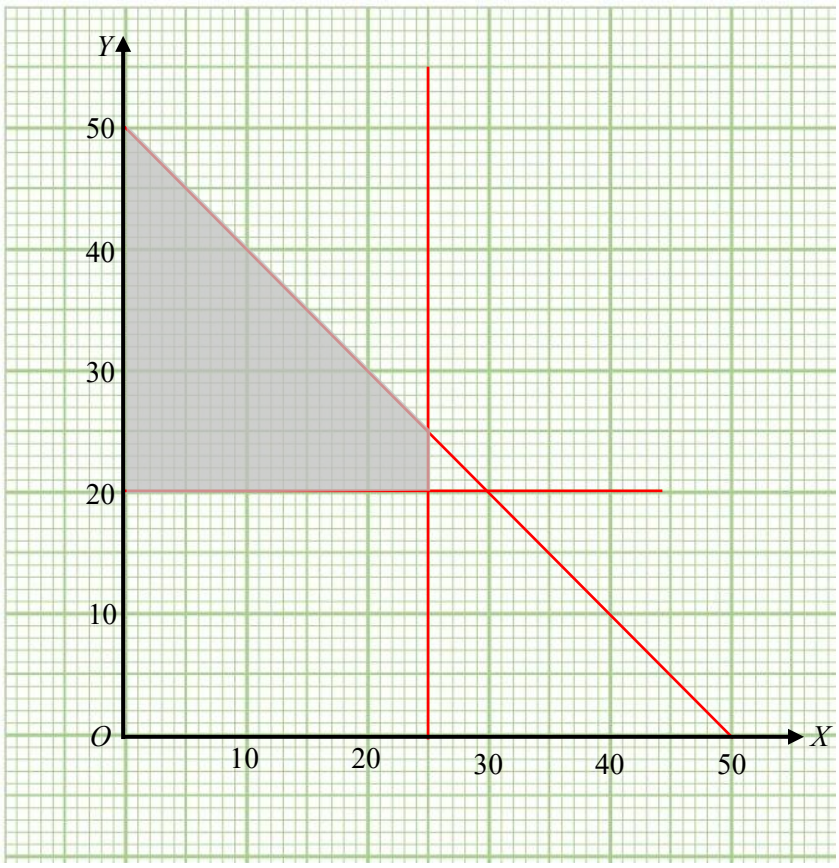
7	(a)	$m_{AB} = m_{CD}$ $m_{AB} = \frac{0-5}{2-0}$ $= -\frac{5}{2}$ $5 = -\frac{5}{2}(3) + c$ $c = \frac{25}{2}$ Maka, persamaan garis lurus *AB* ialah $y = -\frac{5}{2}x + \frac{25}{2}$. *Thus, the equation of the straight line AB is* $y = -\frac{5}{2}x + \frac{25}{2}$.	1 1 1
	(b)	$0 = -\frac{5}{2}x + \frac{25}{2}$ $x = 5$ Maka, $pintasan - x / x - intercept = 5$	1 1
8	(a)		1
	(b)	$4 + 2h + 5 + h + 6 + 9 = 30$ $3h + 24 = 30$ $3h = 6$ $h = 2$	1 1

9		Aliran tunai *Cash flow* = Baki pendapatan-jumlah perbelanjaan *Income balance – Total expenses* = RM5 600 – RM500 – (RM1 100 + RM850 + RM300 + RM400 + RM1 200 + RM500 + RM200) = RM5 100 – RM4 550 = RM550 Aliran tunai positif sebanyak RM550 adalah baik kerana Encik Salleh boleh menyimpan wang itu dan jika menghadapi situasi kecemasan. *A positive cash flow of* RM550 *is good because Mr. Salleh can save the money and in case of emergency.*	2 1,1
10		$\frac{1}{2} \times \frac{4}{3} \times \frac{22}{7} \times 3.5^3 + \left(\frac{1}{3} \times \frac{22}{7} \times 3.5^2 \times t \right) = 192.5$ $\frac{77}{6} t = \frac{308}{3}$ $t = 8$	2 1 1

BAHAGIAN B			
Soalan		**Cadangan Jawapan**	**Markah**
11	(a)	Ya, semua sudut sepadan adalah sama dan semua Nisbah sisi sepadan adalah sama. *Yes, all the corresponding angles are equal and all the ratios of corresponding sides are equal.*	1
	(b) (i)	Pembesaran, faktor skala $\frac{1}{2}$, pusat E atau/or (5, 5)	3
	(b) (ii)	Pantulan pada garis $y = x$	2
	(c)	Luas $EJKL = \left(\frac{1}{2}\right)^2 \times 120$ $120 - 30$ 90	1 1 1
12	(a)	$2 \times 8 - 4k = 0$ $k = 4$	1 1
	(b)	$m = 4$ $n = 2$	1 1
	(c)	$x =$ umur siti, $y =$ umur Puan Aminah $x + y = 86$ atau/or $2x - y = -2$ atau setara/or equivalent $\begin{bmatrix} 1 & 1 \\ 2 & -1 \end{bmatrix}\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 86 \\ -2 \end{bmatrix}$ $\begin{bmatrix} x \\ y \end{bmatrix} = \frac{1}{(1 \times -1) - (1 \times 2)}\begin{bmatrix} -1 & -1 \\ -2 & 1 \end{bmatrix}\begin{bmatrix} 86 \\ -2 \end{bmatrix}$ $x = 28$ $y = 58$	 1 1 1 1 1
13	(a) (i)	$\frac{95}{100} \times 400000$ 380000	1 1

	(a) (ii)	$\frac{x}{380000}\times 235000$ $\frac{x}{380000}\times 235000-5000=136000$ 228000	1 1 1
	(b)	Baki nilai kereta = $\frac{119000}{1000}\times 20.30$ atau RM2415.70 Premium Asas = $\frac{119000}{1000}\times 20.30+243.90$ atau RM2659.60 NCD = $\frac{45}{100}\times\left(\frac{119000}{1000}\times 20.30+243.90\right)$ atau RM1196.82 Premium Kasar = RM1 462.78	1 1 1 1
14	(a)	<table><tr><th>Kekerapan longgokan Cummulative frequency</th><th>Sempadan Atas Upper boundary</th></tr><tr><td>4</td><td>49.5</td></tr><tr><td>12</td><td>59.5</td></tr><tr><td>24</td><td>69.5</td></tr><tr><td>34</td><td>79.5</td></tr><tr><td>43</td><td>89.5</td></tr><tr><td>50</td><td>99.5</td></tr></table>	2

	(b)	 Paksi – 1m Plot – 2m (Jika salah 1 atau 2 plot diberi 1m) Garisan ogif mengenai semua titik – 1m	4

14	(c)	$\frac{75}{100} \times 50$ di lihat Garisan persentil dibina di graf ogif beri 83.5%	1 1 1
15	(a)	$p + q \leq 50$ $p \leq 25$ $q \geq 20$	1 1 1
	(b) (i)	 Setiap garisan yang betul 1 m dan lorekkan 1 m	4m
	(b) (ii)	minimum = 20 maksimum = 35	1m 1m

BAHAGIAN C			
Soalan		**Cadangan Jawapan**	**Markah**
16	(a)	$P = \sqrt{25^2 - x^2}$ $2x^2 - 62x + 336 = 0$ $x = 24, x = 7$	1 1 1,1
	(b)	$t = \frac{p}{5w}$ $5 = \frac{62}{5w}$ $w = 2.48$ $\approx 3\ pekerja$	1 1 1 1
	(c) (i)	$\frac{85000 + 85000(0.05)(6)}{6 \times 12}$ = 1534.72	1 1
	(c) (ii)	$\frac{85000 + 85000(0.05)(5)}{5 \times 12}$ = 1770.83 1770.83-1534.72 =236.11	 1 1
	(d)	$(1 \times 5^2) + (1 \times 5^1)$ atau $(1 \times 8^1) + (4 \times 8^0)$ 30 atau 12 2(30) + 3(12) 96	1 1 1
17	(a)	$(4x)^2 + (x + 2)^2 = (2x + 7)^2$ $16x^2 + x^2 + 4x + 4 = 4x^2 + 28x + 49$ $13x^2 - 24x - 45 = 0$ $x = 3$ atau $x = -1.15$ (tidak diterima) $x = 3$	1 1 1 1

	(b)	$(5 \times 6^3) + (5 \times 6^2) + (1 \times 6^0)$ atau $(1 \times 4^3) + (2 \times 4^1) + (3 \times 4^0)$ 1261 atau 75 1261 + 480 +(75 x 3 x 3) 2416	1 1 1
	(c)	$t = \frac{0.18n}{p}$ $t = \frac{0.18(50)}{2}$ $= 4.5$ jam $=$ 4 jam 30 minit	1 1 1 1
	(d) (i)	(250 x 24) - 4800 = 1200	1 1
	(d) (ii)	$250 = \frac{4800+4800(x)(2)}{24}$ = 0.125 x 100 = 12.5 %	1 1