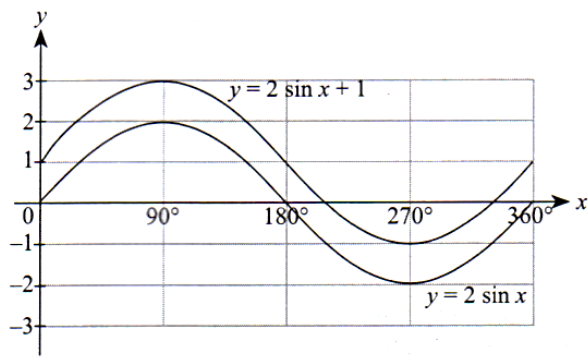
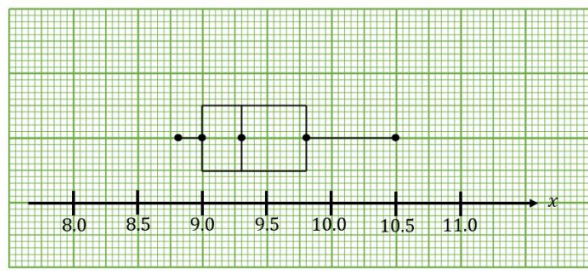


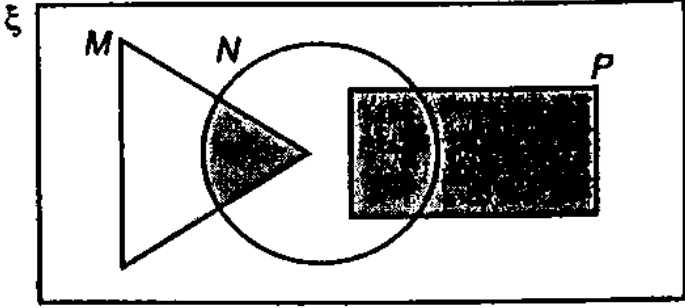
SKEMA PERMARKAHAN UJIAN PERCUBAAN SPM 2025

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	 Amplitud ialah 2 / <i>Amplitude 2</i> x bagi nilai maksimum = 90° / x for maximum value 90° x bagi nilai minimum = 270° / x for minimum value = 270°	1 1 1
4	RM52 000 – (RM9 000 + RM5 000 + RM2 500) RM35 500 Tidak layak. Pendapatan bercukainya melebihi RM35 000 <i>Not eligible. His chargeable income exceeds RM35 000</i>	2 1 1

5	(a)	$\frac{0 - 15}{12} = -\frac{15}{12} = -1.25 \text{ ms}^{-2}$	1
	(b)	$\left[\frac{1}{2}(v + 15)10 \right] + (15 \times 8) + \left(\frac{1}{2} \times 12 \times 15 \right) = 375$ $5v + 75 + 120 + 90 = 375$ $5v = 90$ $v = 18$	2 1
6		$x = 9.1$  Nilai minimum dan maksimum Median, Kuartil 1 dan kuartil 3 Plot kotak dilukis betul	1 1 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 $-x/x - \text{intercept} = 5$	1	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 <i>Cash flow</i> = Baki pendapatan-jumlah perbelanjaan <i>Income balance – Total expenses</i> = 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. <i>A positive cash flow of RM550 is good because Mr. Salleh can save the money and in case of emergency.</i>	2
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

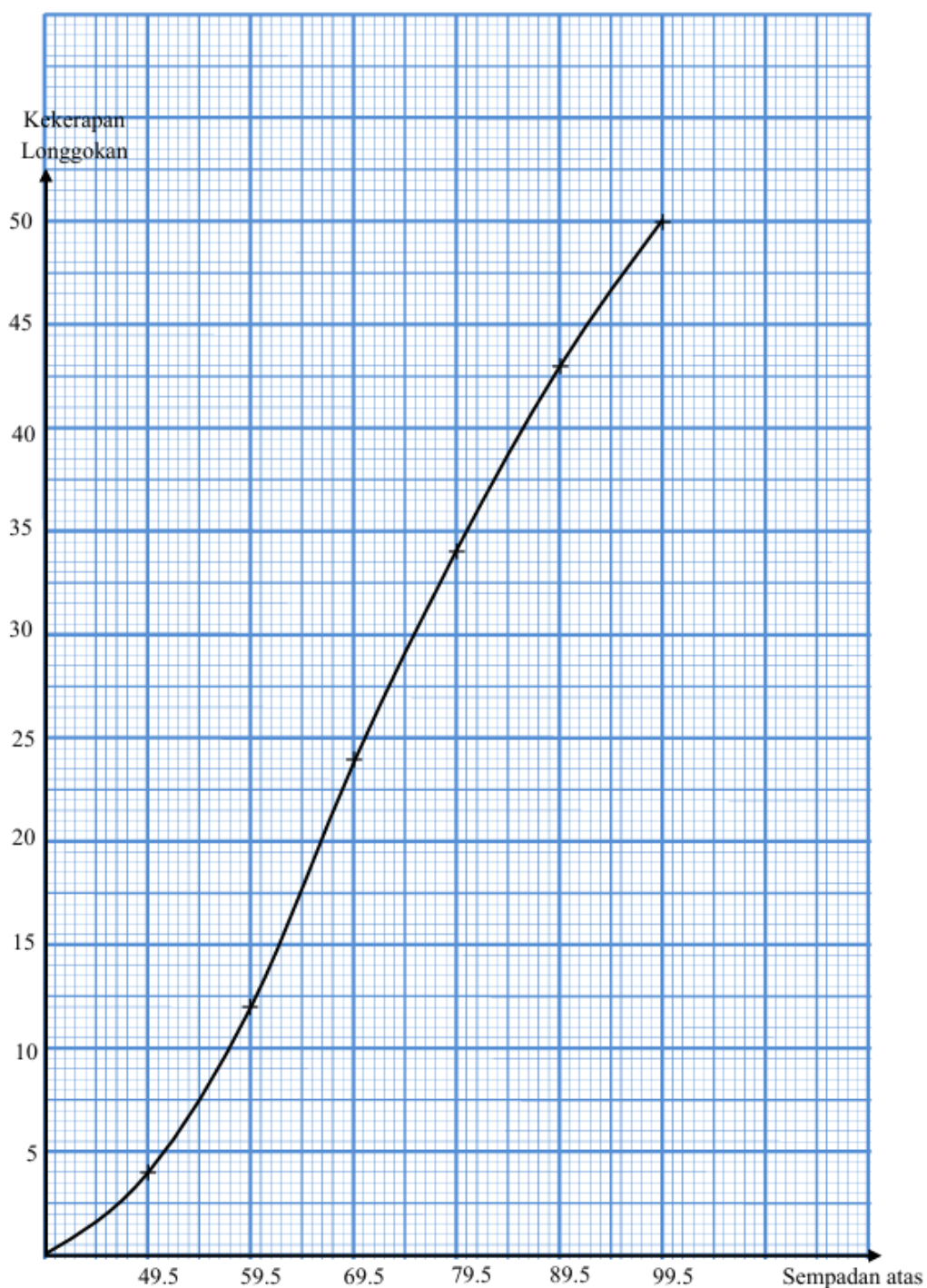
BAHAGIAN B

Soalan		Cadangan Jawapan	Markah
11	(a)	Ya, semua sudut sepadan adalah sama dan semua Nisbah sisi sepadan adalah sama. <i>Yes, all the corresponding angles are equal and all the ratios of corresponding sides are equal.</i>	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)	$x = \text{umur siti}, y = \text{umur Puan Aminah}$ $x + y = 86$ 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 <i>Cummulative frequency</i></th><th>Sempadan Atas <i>Upper boundary</i></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>	Kekerapan longgokan <i>Cummulative frequency</i>	Sempadan Atas <i>Upper boundary</i>	4	49.5	12	59.5	24	69.5	34	79.5	43	89.5	50	99.5	2
Kekerapan longgokan <i>Cummulative frequency</i>	Sempadan Atas <i>Upper boundary</i>																
4	49.5																
12	59.5																
24	69.5																
34	79.5																
43	89.5																
50	99.5																

(b)

4

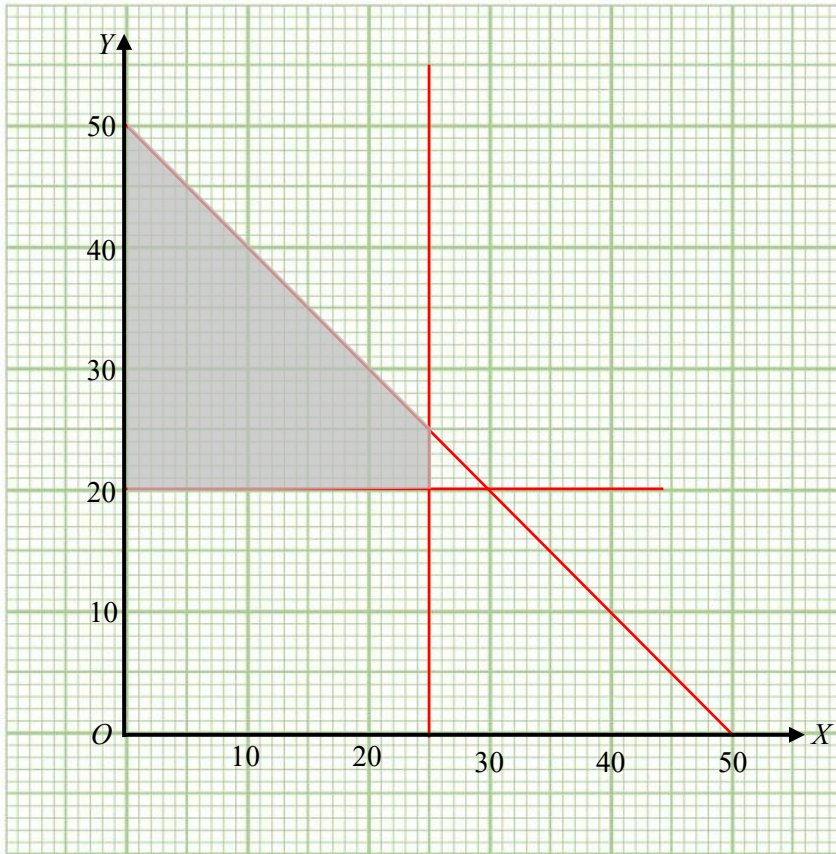


Paksi – 1m

Plot – 2m (Jika salah 1 atau 2 plot diberi 1m)

Garisan ogif mengenai semua titik – 1m



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)	$t = \frac{p}{5w}$ $5 = \frac{62}{5w}$ $w = 2.48$ $\approx 3 \text{ pekerja}$	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 $1261 + 480 + (75 \times 3 \times 3)$ 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)	$(250 \times 24) - 4800$ = 1200	1 1
	(d) (ii)	$250 = \frac{4800 + 4800(x)(2)}{24}$ = 0.125×100 = 12.5 %	1 1