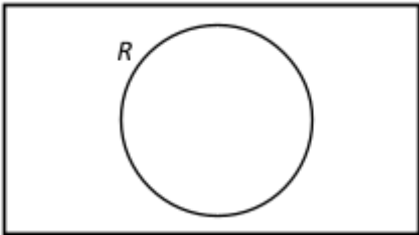


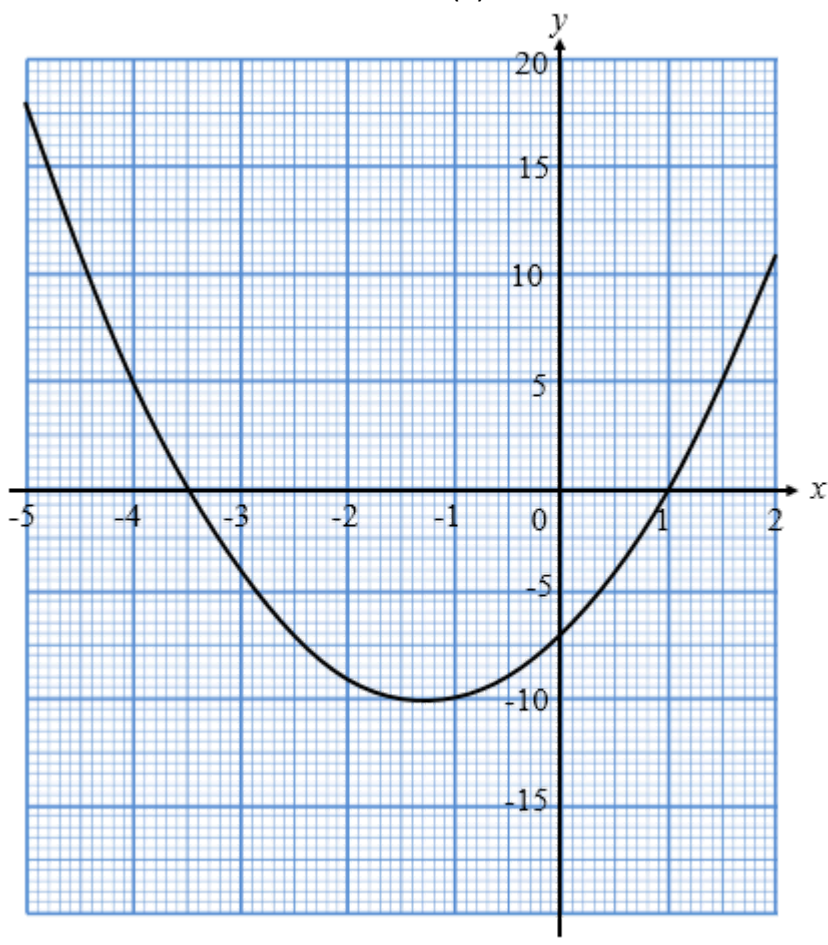
SKEMA JAWAPAN PERCUBAAN MATEMATIK SPM 2022

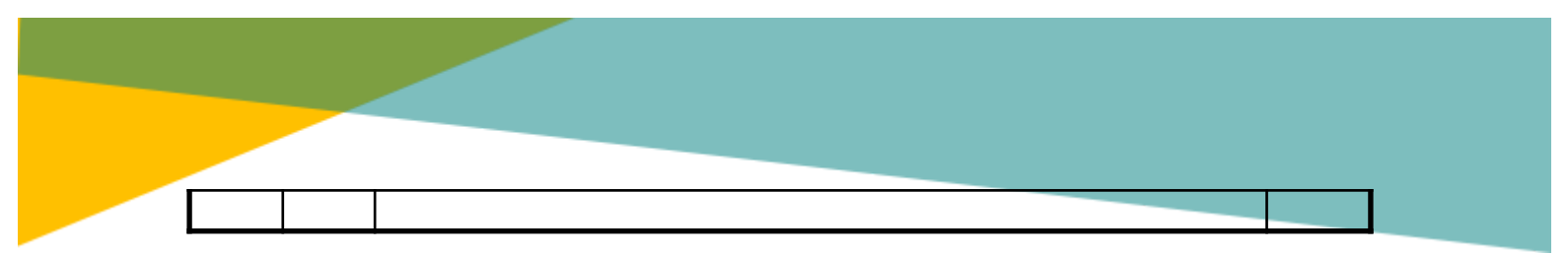
KERTAS 2

1.	$I = kj^2k = \frac{I}{j^2}$ $k = \frac{1250}{25^2}$ $k = 2$	 1m 1m 1m
2.	Kos perubatan selepas deduktibel: = RM35 000 – RM1 000 = RM34 000. Kos ditanggung oleh syarikat insurans: = $\frac{80}{100} \times RM34\ 000$ = RM27 200 Kos ditanggung oleh Lokman sendiri: = $\frac{20}{100} \times RM34\ 000 + RM1\ 000$ = RM7 800	 1m 1m 1m 1m
3.	$12x + 13y = 101$ $17x + 8y = 9$ $\begin{bmatrix} 12 & 13 \\ 17 & 8 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 101 \\ 91 \end{bmatrix}$ $\begin{bmatrix} x \\ y \end{bmatrix} = \frac{1}{12(8) - 13(17)} \begin{bmatrix} 8 & -13 \\ -17 & 12 \end{bmatrix} \begin{bmatrix} 101 \\ 91 \end{bmatrix}$ $x = 3$ $y = 5$	 1m 1m 1m 1m 1m

4.	Tapak kuboid: $8 \times 8 \times 4$	1m
	Isipadu tiang: $404 - 60 - (8 \times 8 \times 4)$	1m
	Isipadu tiang berbentuk silinder = 88 $\frac{22}{7} \times 2^2 \times t = 88$	1m
	$t = 7 \text{ cm}$	1m
5.	Persamaan garis lurus PS: $x = -2$	1m
	Persamaan garis lurus RS $m_{RS} = m_{PQ} = \frac{6-4}{4+2} = \frac{1}{3}$	1m
	$y = \frac{1}{3}x + c$ $1 = \frac{1}{3}(9) + c$ $c = -2$	1m
	Persamaan RS: $y = \frac{1}{3}x - 2$	1m
6(a)	Benar	1m
(b)	Jika $\sqrt{x} = 7$, maka $x = 49$	1m
		1m
(c)	Jika $x = 49$, maka $\sqrt{x} = 7$	
	$5x \neq 20$	
7	S 	3m

	Set R dilukis beri 1 m		

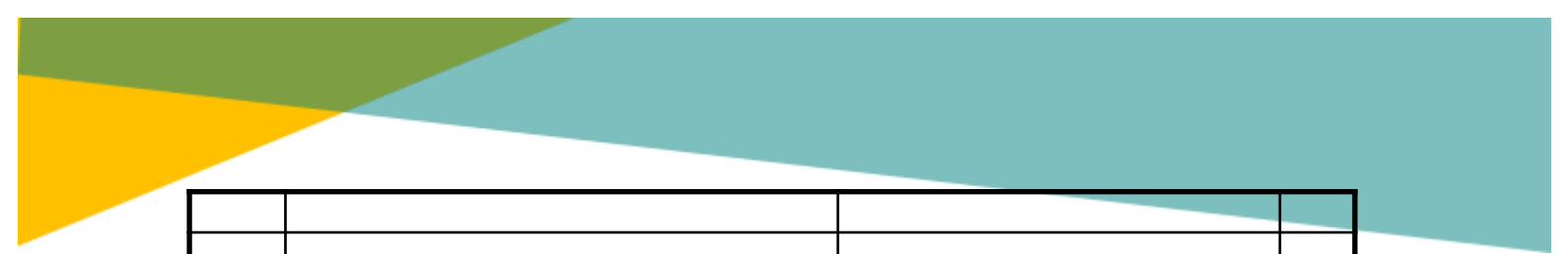
8.	- 10	1m
	(b) 	4m
9.	$(x - 3)(2x - 3) = 14$ $2x^2 - 9x - 5 = 0$ $(x - 5)(2x + 1) = 0$ $x = 5, -\frac{1}{2}$ Cokelat Amin = 5	1m 1m 1m 1m
10.	$\{(J,M), (J,5), (J,N), (J,8), (4,M), (4,5), (4,N), (4,8), (Q,M), (Q,5), (Q,N), (Q,8), (R,M), (R,5), (R,N), (R,8)\}$	2m
	$\{(J,5), (J,8), (4,M), (4,N), (Q,5), (Q,8), (R,5), (R,8)\}$ $= \frac{1}{2}$	1m 1m

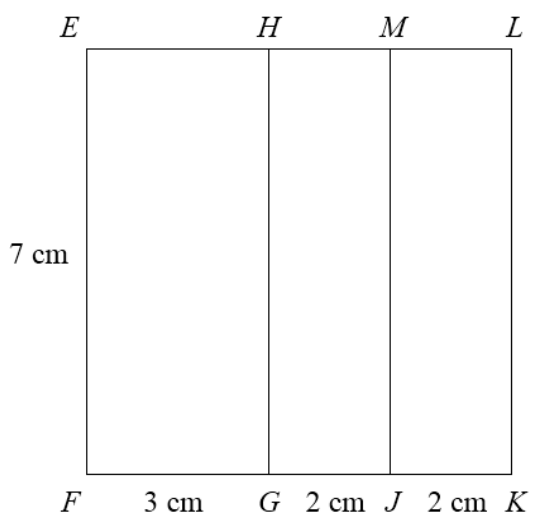
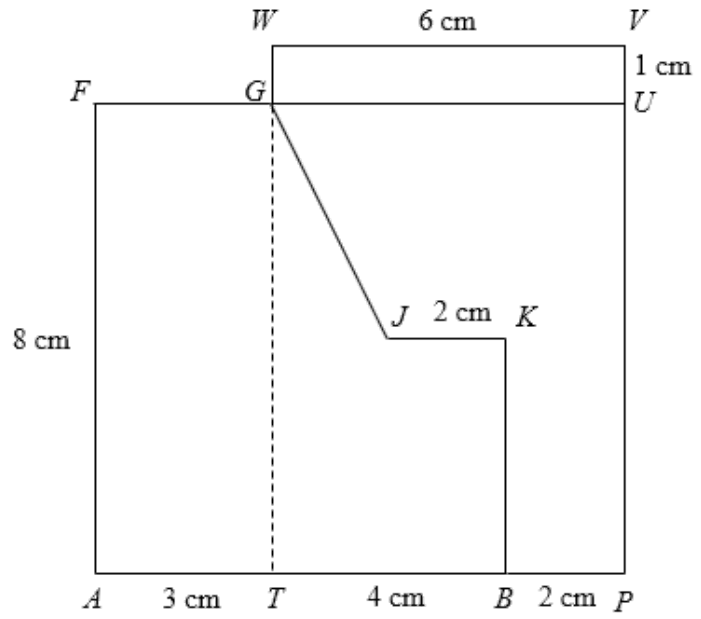


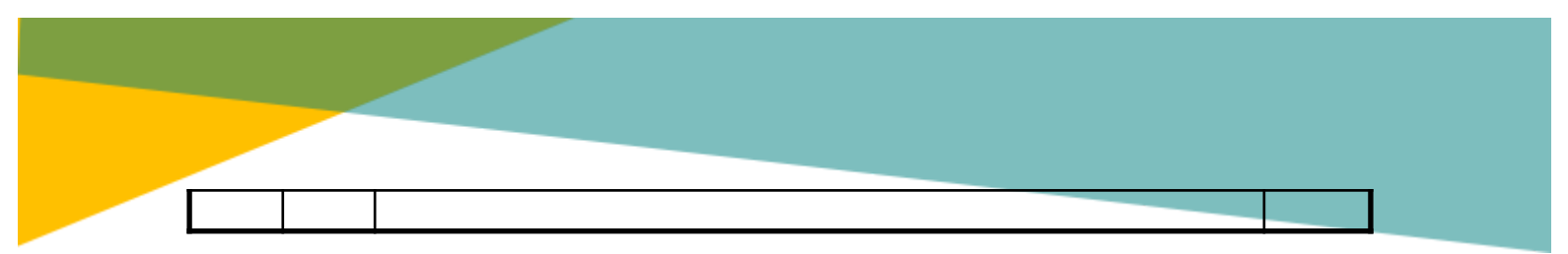
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13(a)		Class Interval	Frequency	Midpoint		
	I	11 – 15	3	13		
	II	16 – 20	4	18		
	III	21 – 25	7	23		
	I V	26 – 30	6	28	P1 P1 P1	
	V	31 – 35	3	33		
	V I	36 – 40	1	38		
(b)	$\frac{3 \times 13 + 4 \times 18 + 7 \times 23 + 6 \times 28 + 3 \times 33 + 1 \times 38}{24}$				K1	
(c)	$\frac{577}{24}$ or $24\frac{1}{24}$ or 24.04					
(d)	Graph				P1	
	Axes drawn in correct directions with uniform scales for $13 \leq x \leq 3$ and $0 \leq y \leq 7$. (x-axis is labelled by midpoints / class boundaries / class intervals)				K1 N1	
	All 6 bars are correctly drawn Complete histogram using the given scale for $13 \leq x \leq 38$ and $0 \leq y \leq 7$.				K1	
	Bentuk loceng					

12

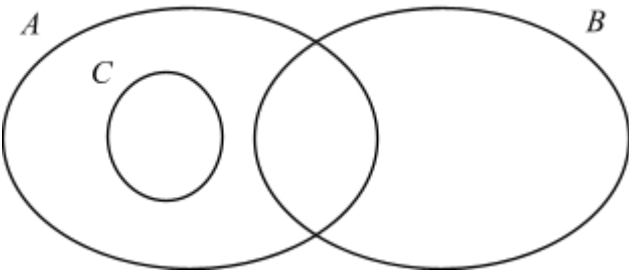
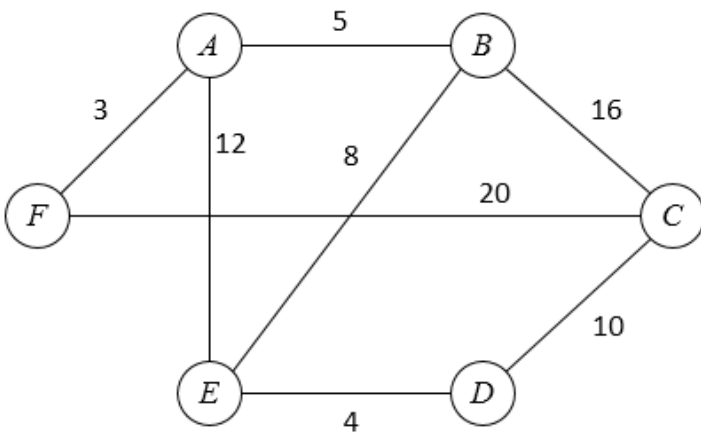
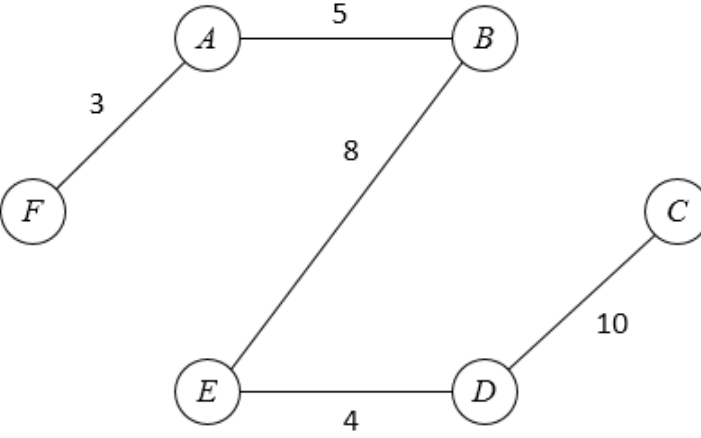


14.	(a)			4m
	(b)			5m
15.	(a)	(i)	(4, 1)	1m
		(ii)	(2, -2)	1m
		(iii)	(4, 2)	1m
	(b)	(i)	V : Putaran 180° Pada pusat (7, 6)	3m
		(ii)	W : Putaran 90° Ikut arah jam Pada pusat H(9,5)	3m



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16.	(a)	(i)	$SR = 35 + x$	1m
		(ii)	$L = (35 + x)(12 + x)$ $L = x^2 + 47x + 420$	1m 1m
		(iii)	$x^2 + 47x + 420 - \frac{1}{2} \times 12 \times x = 650$ $x^2 + 41x - 230 = 0$ $(x - 5)(x + 46) = 0$ $x = 5$	1m 1m 1m 1m
	(b)		$AB = \sqrt{12^2 + 5^2} = 13$ $35 + 13 + 5 + 40 + 17 = 110$ $110 \times RM13 = RM1430$ $1430 + \frac{1430}{2} = RM2145$ Tak mencukupi	1m 1m 1m 1m 1m
	(c)		Luas $= 40 \times 17$ Cukai tanah $= 0.43 \times 40 \times 17$ $= 292.40$	1m 1m 1m

17.	(a)	(i) & (ii)	 Pen, Pembaris, Pemadam, Buku nota	2m 2m 1m
	(b)	(i)		2m
		(ii)		2m
			Jarak minimum = $3 + 5 + 8 + 4 + 10 = 30$ km	1m

	(c)	(i)	<u>Pilihan A:</u> $\frac{200000+(200000 \times 0.035 \times 10)}{12 \times 10}$ RM 2 250 <u>Pilihan B:</u> $\frac{200000+(200000 \times 0.038 \times 15)}{12 \times 15}$ RM 1 744.44	1m
		(ii)	$(1\,744.44 \times 12 \times 15) - (2\,250 \times 12 \times 10)$ $= RM\,43\,999.20$	1m