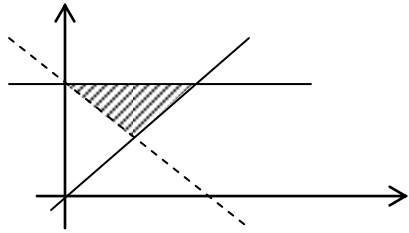


SKEMA PEMARKAHAN KERTAS 2

No.	PEMARKAHAN	MARKAH	JUMLAH
1	<p>Line $x + y = 7$ drawn</p>  <p>Correct region shaded</p> <p>Note: Solid line $x + y = 7$ drawn (minus 1 mark)</p>	K1 N2	
3.	$3x^2 + 11x - 4 = 0$ $(3x - 1)(x + 4) = 0$ $x = \frac{1}{3}, -4$	K1 K1 N1, N1	4
3	$10r + 8s = 2$ or equivalent $33s = -33$ or equivalent $r = 1, s = -1$	K1 K1 N1 N1	4
4	$\angle FAD$ seen $\tan \angle FAD = \frac{5}{8}$ $\angle FAD = 32^\circ$	P1 K1 N1	3
5	$\frac{22}{7} \times 14 \times 14 \times 30$ $\frac{1}{3} \times \frac{22}{7} \times 7 \times 7 \times 15$ $\frac{22}{7} \times 14 \times 14 \times 30 - 2(\frac{1}{3} \times \frac{22}{7} \times 7 \times 7 \times 15)$ 16940	K1 K1 K1 N1	4
6	a) Statement b) If $P \subset R$ then $R' \subset P'$ If $R' \subset P'$ than $P \subset R$ c) $3n^2 - 1, n = 1, 2, 3, \dots$	P1 P1 P1 P1, P1	5

SKEMA MATEMATIK PEPERIKSAAN PERCUBAAN SPM SBP 2011

7	a	$10 = 4k - 22$ $k = 8$	K1 N1	6
	b	$y = 2x + 5$ $0 = 2x + 5$ $x = -\frac{5}{2}$ coordinates of x -intercept is $(-\frac{5}{2}, 0)$	K1N1 K1 N1	
8	(a)	$S = \{(GO_1), (GO_2), (GD), (O_1G), (O_1O_2), (O_1D), (O_2G), (O_2O_1), (O_2D), (DG), (DO_1), (DO_2)\}$	K1	5
	(b)	(i) $\frac{6}{12}$ or $\frac{1}{2}$ Note: Without listing in (a) or working- NO	N2	
		(ii) $\frac{2}{12}$ or $\frac{1}{6}$ Note: Without listing in (a) or working- NO	N2	
9	(a)	$\frac{150}{360} \times 2 \times \frac{22}{7} \times 7$ $(\frac{150}{360} \times 2 \times \frac{22}{7} \times 7) + 7 + 7$ $32\frac{1}{3}$ or 32.33	K1 K1 N1	6
	(b)	$\frac{150}{360} \times \frac{22}{7} \times 7^2$ or $\frac{60}{360} \times \frac{22}{7} \times 7^2$ $\frac{150}{360} \times \frac{22}{7} \times 7^2 - \frac{60}{360} \times \frac{22}{7} \times 7^2$ $38\frac{1}{2}$ or 38.5	K1 K1 N1	

SKEMA MATEMATIK PEPERIKSAAN PERCUBAAN SPM SBP 2011

10	(a) (b) (c)	<p>400</p> <p>$\frac{20}{12}$</p> <p>1.67</p> <p>$\frac{1}{2}(20+32)20 + \frac{1}{2}(20+30)(t-32) = 620$</p> <p>$t = 36$</p>	<p>P1</p> <p>K1</p> <p>N1</p> <p>K2</p> <p>N1</p>	6
11	a b	<p>$m = \frac{1}{2}, n = 2$</p> <p>$\begin{pmatrix} 6 & -2 \\ 4 & -1 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 9 \\ 5 \end{pmatrix}$</p> <p>$\begin{pmatrix} x \\ y \end{pmatrix} = \frac{1}{2} \begin{pmatrix} -1 & 2 \\ -4 & 6 \end{pmatrix} \begin{pmatrix} 9 \\ 5 \end{pmatrix}$</p> <p>$x = \frac{1}{2}, y = -3$</p>	<p>N1 N1</p> <p>P1</p> <p>K1</p> <p>N1N1</p>	6

12	(a) (b) Graph (c) (d)	<table border="1" data-bbox="349 1144 571 1218"> <tr> <td>x</td> <td>-1</td> <td>3</td> </tr> <tr> <td>y</td> <td>9</td> <td>-3</td> </tr> </table> <p>Axes drawn in the correct direction , the uniform scale is in the range given. 8 coordinates plotted correctly in the range given. Smooth curve drawn continuously in the range without a straight line at any part and passed through 9 correct coordinates .</p> <p>(i) $y = 8.2 \pm 0.2$ (ii) $x = -2.8 \pm 0.1, 1.8 \pm 0.1$</p> <p>Identify the equation $y = -3x + 5$ or equivalent. Draw the line $y = -3x + 5$</p> <p>$x = 3.2 \pm 0.1, -1.2 \pm 0.1$</p>	x	-1	3	y	9	-3	<p>K1K1</p> <p>K1</p> <p>K2</p> <p>N1</p> <p>P1</p> <p>P1</p> <p>K1</p> <p>K1</p> <p>N1 N1</p>	12
x	-1	3								
y	9	-3								

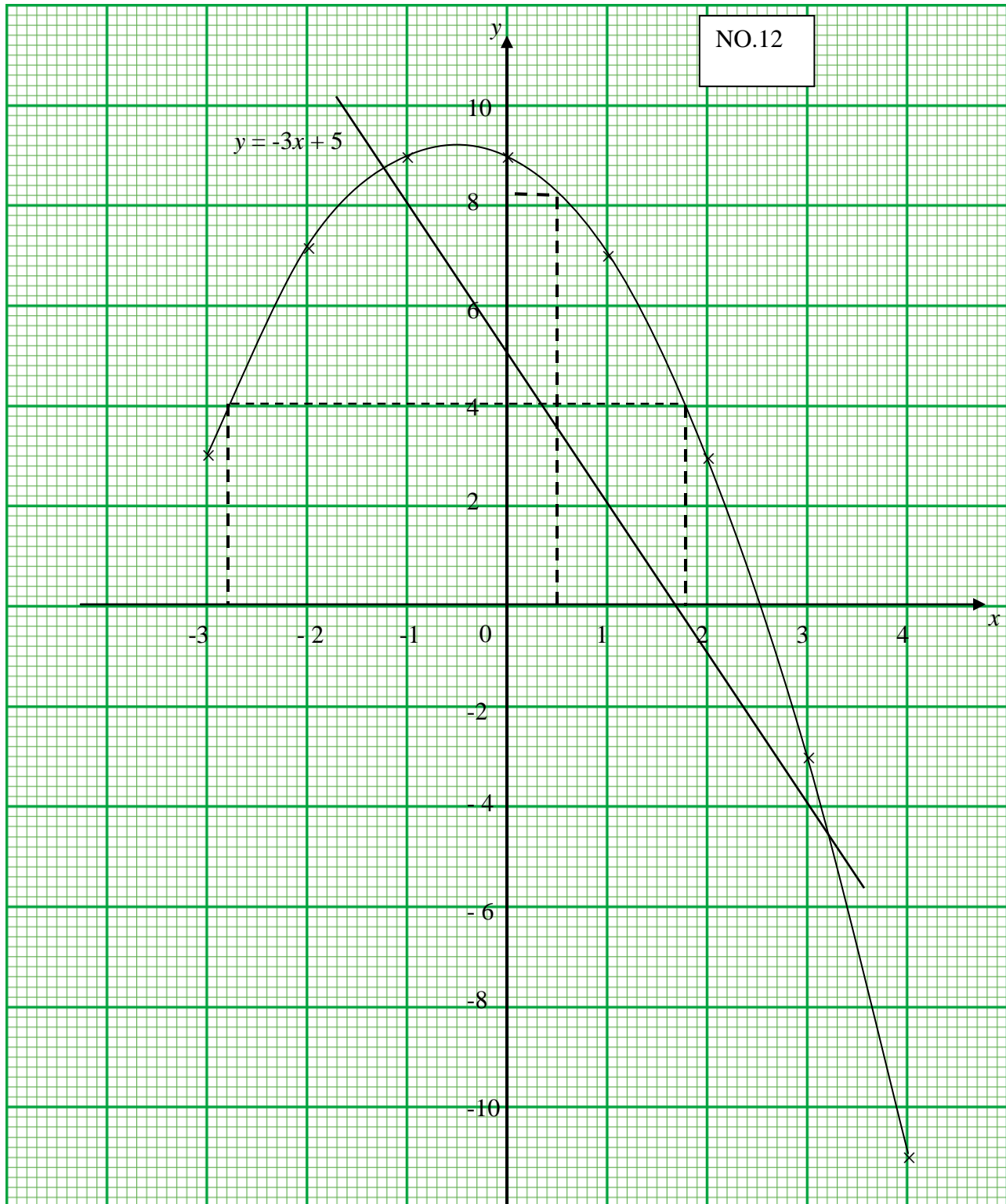
SKEMA MATEMATIK PEPERIKSAAN PERCUBAAN SPM SBP 2011

13	(a)	(i) $k = -2$	K1	12
		(ii) (a) (0, 8)	N1	
	(b) (2, 1)	N2		
	(b)	(i) (a) V is a reflection in the line $x = -3$	P2	
		(b) W is an enlargement with scale factor of 2 at the centre of A (-3, 4)	P3	
		(ii) $2^2 \times x = x + 150$	K1	
$3x = 150$ $x = 50$ or equivalent		N1 N1		

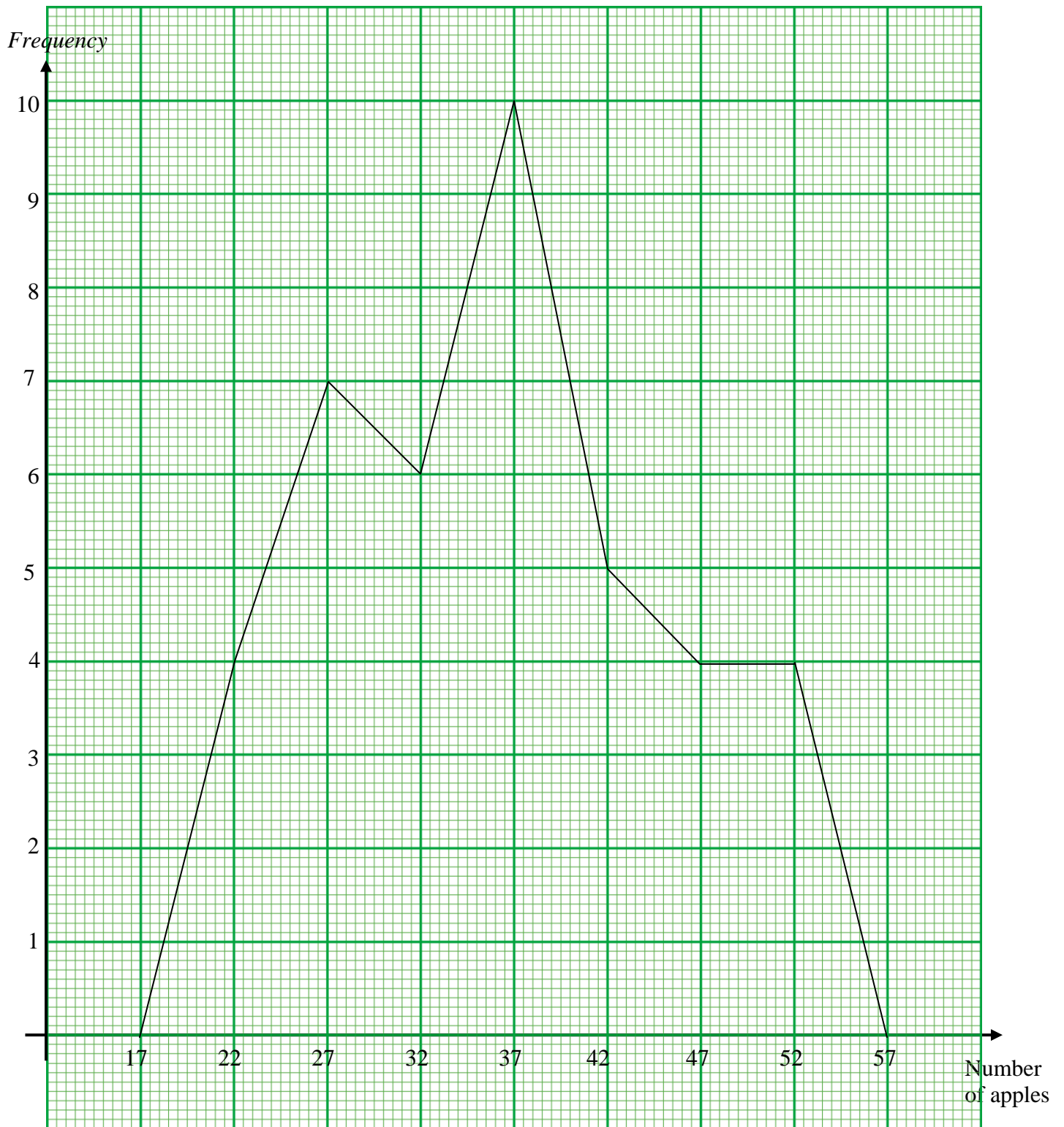
14	(a)	<table border="1"> <thead> <tr> <th>Class interval <i>Selang kelas</i></th> <th>Midpoint <i>Titik tengah</i></th> <th>Frequency <i>Kekerapan</i></th> </tr> </thead> <tbody> <tr> <td>20 – 24</td> <td>22</td> <td>4</td> </tr> <tr> <td>25 – 29</td> <td>27</td> <td>7</td> </tr> <tr> <td>30 – 34</td> <td>32</td> <td>6</td> </tr> <tr> <td>35 – 39</td> <td>37</td> <td>10</td> </tr> <tr> <td>40 – 44</td> <td>42</td> <td>5</td> </tr> <tr> <td>45 – 49</td> <td>47</td> <td>4</td> </tr> <tr> <td>50 – 54</td> <td>52</td> <td>4</td> </tr> </tbody> </table>	Class interval <i>Selang kelas</i>	Midpoint <i>Titik tengah</i>	Frequency <i>Kekerapan</i>	20 – 24	22	4	25 – 29	27	7	30 – 34	32	6	35 – 39	37	10	40 – 44	42	5	45 – 49	47	4	50 – 54	52	4		
		Class interval <i>Selang kelas</i>	Midpoint <i>Titik tengah</i>	Frequency <i>Kekerapan</i>																								
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		30 – 34	32	6																								
		35 – 39	37	10																								
		40 – 44	42	5																								
		45 – 49	47	4																								
		50 – 54	52	4																								
		Column I	P1																									
Column II	P1																											
Column III	P2																											
(b) (i) 35 - 39																												
(ii) $\frac{4(22) + 7(27) + 6(32) + 10(37) + 5(42) + 4(47) + 4(52)}{40}$	K2																											
$\frac{1445}{40}$																												
36.125 or $36\frac{1}{8}$	N1																											
(c) Axes drawn in the correct direction , the uniform scale is in the range given.	K1																											
7 points plotted correctly	K2																											
Close polygon shape drawn through 6 points and point (17,0) and (57,0)	N1																											

SKEMA MATEMATIK PEPERIKSAAN PERCUBAAN SPM SBP 2011

16(a)	$50^\circ N$	P1 P1	
(b)	$(50^\circ S, 60^\circ W)$	P1 P1	
(c)	$(40+40) 60$ 4800 n.m.	K1 K1 N1	
(d)	(i) 600×2 1200 n.m.	K1 N1	
	(ii) $\theta \times 60 \cos 50 = 1200$ $\theta = 31.11^\circ$	K1 K1	
	$120^\circ E - 31.11^\circ = 88^\circ 53'$ \therefore Longitude of T is $88^\circ 53' E$.	N1	



NO.14



SKEMA MATEMATIK PEPERIKSAAN PERCUBAAN SPM SBP 2011

SKEMA KERTAS 1

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