

SULIT

**PROGRAM GEMPUR KECEMERLANGAN
SIJIL PELAJARAN MALAYSIA 2019
NEGERI PERLIS**

SIJIL PELAJARAN MALAYSIA 2019

3472/1(PP)

MATEMATIK TAMBAHAN

Kertas 1

Peraturan Pemarkahan

Ogos

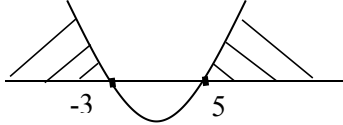
UNTUK KEGUNAAN PEMERIKSA SAHAJA

Peraturan pemarkahan ini mengandungi 6 halaman bercetak

No.	Solution and Mark Scheme	Sub Marks	Total Marks
*B = Be given mark / Diberi markah			
1 (a)	$x = 3$ $\frac{8+2+7+(x^2-2)+5+4}{6} = 5.5$	2 B1	2 4
(b)	6 Median = $\frac{5+7}{2}$	2 B1	2
2(a)	Blue sports house. <i>Rumah sukan Biru.</i> The standard deviation of the blue sports house is the lowest. <i>Sisihan piawai bagi rumah sukan biru adalah paling rendah.</i>	1 1	2 3
(b)	25 or 4 or 9	1	1
3 (a)	10 5C_3	2 B1	2 4
(b)	20 ${}^5C_2 + {}^5C_3$	2 B1	2
4 (a)	0.52 $0.4 \times 0.4 + 0.6 \times 0.6$	2 B1	2 4
(b)	0.192 $0.4 \times 0.6 \times 0.4 + 0.6 \times 0.4 \times 0.4$	2 B1	2
5 (a)	0.281	1	1 3
(b)	$k = 62.9$ $\frac{k - 60}{5} = 0.58$	2 B1	2

No.	Solution and Mark Scheme		Sub Marks	Total Marks
6	$h = 40$ and $k = 90$	3	3	3
	$h = 40$ or $k = 90$	B2		
	40 U, 90 B	B1		
7	$\frac{x}{10} + \frac{y}{5} = 1$	3	3	3
	$y - 4 = -\frac{1}{2}(x - 2)$ OR $4 = -\frac{1}{2}(2) + c$	B2		
	$m_2 = -\frac{1}{2}$	B1		
8	$h = -7$ and $h = 17$	3	3	3
	$h = -7$ or $h = 17$	B2		
	$5 - h = \pm 12$ OR $(h - 17)(h + 7) = 0$	B1		
9	$\begin{pmatrix} -\frac{4}{5} \\ \frac{3}{5} \end{pmatrix}$ OR $\frac{-4i+3j}{5}$	3	3	3
	$ \overrightarrow{PR} = 5$	B2		
	$\overrightarrow{PR} = \begin{pmatrix} -4 \\ 3 \end{pmatrix}$ OR $\overrightarrow{PR} = -4i + 3j$	B1		
10(a)	$p = 10$	1	1	3
(b)	$f(x) = \frac{1}{x}$	1	1	
(c)	Function/ Fungsi.	1	1	
11(a)	$f(x) = x - 2$	1	1	3
(b)	$m = 5 - 6p$ $gf(x) = 3px - 6p + 5$	2 B1	2	
12(a)	$f(x) = \left(x - \frac{5}{4}\right)^2 - \frac{1}{16}$	1	1	2
(b)	$g(x) = -\left(x - \frac{5}{4}\right)^2 + \frac{1}{16}$	1	1	

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No.	Solution and Mark Scheme		Sub Marks	Total Marks
13	$x < -3, x > 5$ $(x + 3)(x - 5) > 0$  $x^2 - 2x - 15 > 0$	3 B2 B1	3	3
14	$6x^2 - 3x - 2 = 0$ $SOR\ new = \frac{1}{2}$ or $POR\ new = -\frac{1}{3}$ $\alpha + \beta = \frac{3}{2}$ or $\alpha\beta = -3$	3 B2 B1	3	3
15	$w = \frac{3}{2}$ $(-3 + 2w)^2 - 4(1)(0) = 0$ $(-3 + 2w)^2 - 4(1)(0)$ $x^2 - 3x + 2wx = 0$	4 B3 B2 B1	4	4
16	$\frac{pq^4}{27}$ $3^y \cdot 5^y \cdot 3^{3y}(3^{-3})$ $(3 \times 5)^y(3^{3(y-1)})$	3 B2 B1	3	3
17	$\log_a 2p$ $\log_a \left(\frac{p \times 6^2}{18} \right)$ $\log_a p + \log_a 6^2 - \log_a 18$	3 B2 B1	3	3
18	$d = 4\pi$ $d = 2\pi r + 4\pi - 2\pi r$ and $d = 2\pi r + 8\pi - (2\pi r + 4\pi)$ $T_1 = 2\pi r, T_2 = 2\pi r + 4\pi$ and $T_3 = 2\pi r + 8\pi$	3 B2 B1	3	3

No.	Solution and Mark Scheme	Sub Marks	Total Marks
19	$n = 11$ $\left(\frac{1}{2}\right)^{n-1} = \left(\frac{1}{2}\right)^{10}$ $100\left(\frac{1}{2}\right)^{n-1} = \frac{25}{256}$	3 B2 B1	3 3 3
20(a)	$\frac{1}{3}$	1	3
(b)	$\frac{27}{2}$ $\frac{9}{1 - \frac{1}{3}}$	2 B1	2
21	$s = 2 \text{ and } r = -2$ $s = 2 \text{ or } r = -2$ $x^2y = 4x^3 - r$	3 B2 B1	3
22	$3x(x-5)^2(5x-10)$ $3x^2(3)(x-5)^2 + (x-5)^3 6x$ $u' = 6x \text{ or } v' = 3(x-5)^2 \cdot 1$	3 B2 B1	3
23	$\frac{5}{72}$ $\frac{1}{6} \left[\frac{5}{4(5) - 8} - 0 \right]$ $\frac{1}{6} \left[\frac{x}{4x - 8} \right]_0^5$	3 B2 B1	3

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No.	Solution and Mark Scheme		Sub Marks	Total Marks
24(a)	$\sin \theta = \frac{p}{\sqrt{1^2 + (-p)^2}}$	2	2	4
	$\sqrt{1^2 + (-p)^2}$	B1		
(b)	$= \frac{1+p}{1-p}$	2	2	
	$\frac{1 - (-p)}{1 + (1)(-p)}$	B1		
25(a)	1.287	1	1	3
(b)	13.12	2	2	
	$21 - \left(\frac{1}{2} \times 3.5^2 \times 1.287\right)$	B1		

PERATURAN PEMARKAHAN TAMAT