

SULIT



PRAKTIS BESTARI
PROJEK JAWAB UNTUK JAYA (JUJ) 2016



SIJIL PELAJARAN MALAYSIA
ADDITIONAL MATHEMATICS
Kertas 1 / Set 1

3472/1

PERATURAN PEMARKAHAN

YAYASAN
PAHANG
PAHANG STATE FOUNDATION

Peraturan Pemarkahan ini mengandungi 5 halaman bercetak

PERATURAN PEMARKAHAN SET 1 KERTAS 1

No	Peraturan Pemarkahan	Markah	Jumlah Markah
1	$g(x) = x + 10$ B1: $g^{-1}(x) = \frac{x}{2} \quad \text{or} \quad g(x) = 2\left(\frac{x}{2}\right) + 10$	2	2
2	$f^{-1}g(5) = 1$ B2: $f^{-1}g(5) = \frac{2+2}{4}$ B1: $f^{-1}(x) = \frac{x+2}{4} \quad \text{or} \quad g(5) = 2$	3	3
3	$b = \frac{2}{3a+4}$ B2: $b(3a+4) = 2$ B1: $3a - \frac{2}{b} = -4$	3	3
4	$p = 6, -6 \text{ (Both)}$ B2: $\frac{p^2}{4} = 8 + 2\left(\frac{1}{2}\right) \quad \text{OR} \quad p^2 = 36$ B1: $\alpha + \beta = \frac{-p^2}{2} \quad \text{OR} \quad \alpha\beta = \frac{1}{2} \quad \text{OR}$ $(\alpha + \beta)^2 = \alpha^2 + 2\alpha\beta + \beta^2$	3	3
5	$h = 3, k = -5 \text{ (Both)}$ B1: $h = 3 \quad \text{OR} \quad k = -5$	2	2
6	16 B3: $x = \pm 4$ B2: $-13 = -x^2 + 3$ B1: $x = \pm\sqrt{3}$	4	4
7	$m = \frac{4+p}{2}$ B2: $2m - 3 = \log_5 3 + \log_5 5$ B1: $(2m - 3)\log_5 5 = \log_5 15$	3	3

8	$x = 3$ B2: $x = 3x - 6$ B1: $6^x = (6^3)^{x-2}$	3	3
9	$n = 17$ B2: $n > 16.27$ B1: $1.08^n > 3.5$	3	3
10	(a) 108 B1: $S_8 = \frac{8}{2}(3(8)+3)$ (b) 24 B1: $T_8 = S_8 - S_7 @ T_8 = 108 - \left[\frac{7}{2}(3(7)+3) \right]$	2 2	4
11	(a) 2 (b) 4 B1: $\frac{\log_2 k^2}{1-2} = -4$ or $r = 2$	1 3	4
12	$m = 7$ B2: $\frac{m-3}{-2-0} = -2$ B1: $\frac{y}{x} = 3 - 2x$	3	3
13	(a) C (-3, 0) (b) 22 cm B2: $\sqrt{(6-3)^2 + (4-0)^2}$ B1: $\sqrt{(6-3)^2 + (4-0)^2}$ OR $\sqrt{(4-0)^2 + (0-(-3))^2}$	1 2	3
14	$\begin{pmatrix} -5 \\ 12 \end{pmatrix}$ B1: $\begin{pmatrix} 1 \\ -6 \end{pmatrix} + 2 \begin{pmatrix} -3 \\ 9 \end{pmatrix}$ $-\frac{5i}{13} + \frac{12j}{13}$ B1 $\sqrt{(-5)^2 + (12)^2}$	2 2	4

15	$\overrightarrow{QR} = 2b - \frac{4}{3}a$ <p>B2: $\overrightarrow{QR} = \frac{2}{3}\overrightarrow{PR}$</p> <p>B1: $\overrightarrow{PR} = 3b - 2a$ OR $\overrightarrow{PR} = \overrightarrow{PO} + \overrightarrow{OR}$</p>	3	3
16	<p>(a) $r = 2$ cm B1: $30 = r(15)$</p> <p>(b) 34 cm B1: $OR + OS + RS$</p>	2 2	4
17	$\theta = 30^\circ, 48.6^\circ, 131.4^\circ, 150^\circ$ <p>B2: $\sin \beta = \frac{3}{4}$ AND $\sin \beta = \frac{1}{2}$</p> <p>B1: $8(1 - \sin^2 \beta) + 10 \sin \beta = 11$</p>	3	3
18	<p>(a)</p> $p = 4$ <p>B1: $y = 3x - px^{-1}$ OR $\frac{dy}{dx} = 3 + px^{-2}$</p> <p>(b)</p> $3y + x = 14$ <p>B1: $m = -\frac{1}{3}$ OR $3y - 12 = -x + 2$</p>	2 2	4
19	$\frac{4}{27}$ <p>B2: $\frac{12}{(1-4x)^4}$</p> <p>B1: $-3(1-4x)^{-4}(-4)$</p>	3	3
20	$\frac{4}{3}$ <p>B2 : $\frac{1}{2} \left[\frac{8}{3} \right]$</p> <p>B1 : $\frac{1}{2} \left[\frac{2x^2}{(x+1)} \right]_0^2$</p>	3	3

21	RM 8.50 B3: $\bar{x} = \frac{132.5 + 80}{5(5)}$ B2: $\sum x_{NEW} = 6(25.20) - 1.2(17)$ B1: $\sum x = 6(25.20)$	4	4
22	(a) 98 (b) 4 B1: $(14 \times 2) + m = 32$	1 2	3
23	360 B1: ${}^5P_3 \times {}^3P_2$	2	2
24	$\frac{5}{6}$ B2: $\frac{50}{60}$ B1: $\frac{45}{60} + \frac{5}{60}$	3	3
25	GRYTEX (dengan pembuktian) B3: 0.5521 , 1.063 dan 0.08006 TIME: $\frac{134 - 124}{15.2} + \frac{156 - 160}{37.8} = 0.5521$ or B2: GRYTEX: $\frac{147 - 124}{15.2} + \frac{143 - 160}{37.8} = 1.063$ or SMART: $\frac{122 - 124}{15.2} + \frac{168 - 160}{37.8} = 0.08006$ B1: Mana-mana $z = \frac{X - \mu}{\sigma}$	4	4