

No	Penyelesaian dan Skema Markah	Sub markah	Jumlah markah
1	(a) Banyak kepada banyak (b) { 1, 4, 6, 9, 35 }	1 1	2
2	$g^{-1}(x) = \frac{x+4}{3}$ B2: $g(x) = 3x - 4$ B1: $g(x) + 2 = 3x - 2$	1	3
3	$m = 4$ B2: $4m = 16$ B1: $4^2 - 4(1)(m) = 0$	3	3
4	$k = 2$ B2: $8 + k = 10$ B1: $-2(x-2)^2 + 8 + k$	3	3
5	$x^2 + x - 6 = 0$ B2: $4(\alpha\beta) = -6$ dan $2(\alpha + \beta) = -1$ B1: $\alpha + \beta = -\frac{1}{2}$ atau $\alpha\beta = -\frac{3}{2}$	3	3
6	$x = 3$ B2: $2x - 3 = 3$ B1: $5^3$	3	3
7	-0.2827 B2: $\frac{2.322 - 2(1.585)}{3}$ B1: $\frac{\log_2 5 - 2\log_2 3}{\log_2 8}$ @ $\log_8 5 - \log_8 9$	3	3
8	$\frac{16}{33}$ B2: $\frac{0.48}{1-0.01}$ B1: $a = 0.48$ atau $r = 0.01$	3	3

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9	42300 B2: $\frac{36}{2}[(2(300) + 35(50))]$ B1: a = 300 atau 300,350,400	3	3
10	(a) RM 91084 B1: $60000 \times 1.11^4$ (b) RM373,668 B1: $\frac{60000(1.11^5 - 1)}{1.11 - 1}$	2 2	4
11	$k = -3, h = -\frac{3}{2}$ (kedua-dua) B2: $k = -3 @ h = -\frac{3}{2}$ B1: $\frac{1}{2} = \frac{2-h}{7} @ xy = \frac{x^2}{2} + \frac{k^2}{2} @ 2 = \frac{1}{2}(7) + \frac{k}{2}$	3	3
12	(10,7) B2: x = 10 atau y = 7 B1: $\frac{x}{5} = 2 @ \frac{y+8}{5} = 3$	3	3
13	(a) $-\frac{3}{4}$ (b) $y = \frac{4}{3}x - \frac{7}{3}$ B1: Titik tengah AB (4,3) @ $(\frac{8+0}{2}, \frac{0+6}{2})$ atau Kecerunan seranjang atau $y - 3 = 4(x - 4)$	1 2	3
14	Ikut urutan B2: $\theta = 120^\circ, 240^\circ$ $\theta = 48^\circ 11' @ 48.19^\circ, 311^\circ 49' @ 311.81^\circ$ B1: $(2\cos\theta + 1)(3\cos\theta - 2) = 0$	3	3
15	(a) $-4a + 5b$ ~     ~ (b) $\frac{12}{5}a + 2b$ ~     ~ B1: $\vec{AD} = \vec{AB} + \frac{2}{5}\vec{BC}$	1 2	4

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16	<p>(a) <math>\begin{matrix} -5i+12j \\ \sim \quad \sim \end{matrix}</math></p> <p>(b) <math>\begin{matrix} -\frac{5}{13}i+\frac{12}{13}j \\ \sim \quad \sim \end{matrix}</math> atau <math>\frac{-5i+12j}{13}</math> atau <math>\frac{1}{13}\begin{pmatrix} -5 \\ 12 \end{pmatrix}</math></p> <p>B1: <math>\sqrt{(-5)^2+12^2}=13</math></p>	1  2	3
17	<p>4.244 atau <math>13.33\pi</math> atau setara</p> <p>B3: <math>\frac{64}{9\pi(0.4)^2} \times 0.3</math></p> <p>B2: <math>V = \frac{1}{3}\pi\left(\frac{3}{8}h\right)^2(h)</math> atau <math>\frac{dV}{dt} = \frac{9}{64}\pi h^2</math></p> <p>B1: <math>r = \frac{3}{8}h</math> <b>ATAU</b> <math>\frac{dv}{dt} = 0.3</math></p>	4	4
18	<p>(a) <math>3px^2 + 4px + p</math></p> <p>B1: <math>px[2(x+1)(1)] + (x+1)^2(p)</math></p> <p>(b) <math>\frac{1}{2}</math></p> <p>B1: <math>6px + 4p</math> atau <math>6p(3) + 4p = 11</math></p>	2  2	4
19	<p>6</p> <p>B2: <math>4k - \frac{k^3}{3} = 4k - 72</math></p> <p>B1: <math>\left[4x - \frac{x^3}{3}\right]_0^k = 4k - 72</math> atau <math>\int_0^k (4 - x^2) dx</math></p>	3	3
20	<p>(a) 2.094 atau 2.095</p> <p>(b) 5.525 atau 5.526</p> <p>B2: <math>\frac{1}{2} \times 3^2 \times (2.094 - \sin 120^\circ)</math> <b>ATAU</b></p> <p><math>\frac{1}{2} \times 3^2 \times 2.094 - \frac{1}{2} \times 3^2 \times \sin 120^\circ</math></p> <p>B1: <math>\frac{1}{2} \times 3^2 \times 2.094</math> <b>ATAU</b> <math>\frac{1}{2} \times 3^2 \times \sin 120^\circ</math></p>	1  3	4

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21	8 B2: $4 \left[ \frac{x}{2x-3} \right]_1^3$ B1: $4 \int_1^3 \frac{1}{2} g(x) dx$	3	3
22	(a) 9 (b) 4 B1: $\sqrt{\frac{1^2 + 3^2 + 5^2 + 9^2 + 12^2}{5}} - 6^2$	1 2	3
23	72 B2: ${}^5P_5 - {}^2P_2 \times {}^3P_3 \times 4$ atau ${}^5P_5 - 2 \times 6 \times 4$ B1: ${}^5P_5$ atau $5!$ atau $5 \times 4 \times 3 \times 2 \times 1$ <b>ATAU</b> $2 \times 6 \times 4$ atau $2 \times 3 \times 4$	3	3
24	(a) $\frac{3}{10}$ B1: $\frac{2}{5} \times \frac{3}{4}$ (b) $\frac{11}{20}$ B1: $\frac{3}{5} \times \frac{3}{4} + \frac{2}{5} \times \frac{1}{4}$ atau $\frac{3}{5} \times \frac{3}{4}, \frac{2}{5} \times \frac{1}{4}$	2 2	4
25	(a) $\frac{3}{16}$ B1: $p + \frac{3}{8} + \frac{3}{8} + \frac{1}{16} = 1$ (b) $\frac{9}{16}$ B1: $\frac{3}{8} + \frac{3^*}{16}$ atau $1 - \frac{1}{16} - \frac{3}{8}$	2 2	4

PERATURAN PEMARKAHAN TAMAT