

SKEMA PEMARKAHAN MATEMATIK TAMBAHAN KERTAS 1  
PEPERIKSAAN PERCUBAAN TAHUN 2015

No.	Solution and Mark Scheme	Sub Marks	Total Marks
1(a)	$f(x) = x - 1$	1	2
(b)	$m = 4$	1	
2(a)	$h^{-1}(x) = \frac{3 - 2x}{x}$  $y = \frac{3}{2+x}$ B1  $2y + xy = 3$	2	3
(b)	$h^{-1}(2) = -\frac{1}{2}$	1	
3(a)	33	1	3
(b)	$x = 0, x = -2$  B1: $2x^2 + 5x = x$	2	
4	$4 < x < 5$  B1: $(x - 4)(x - 5) = 0$	2	2
5	Dimensi = 200  B3: $-2[x^2 - 20x + (-10)^2 - (-10)^2]$  B2: $L = x(40 - 2x)$  B1: $y = 40 - 2x$	4	4
6	$n = 1$  B2: $5^{n-2} = 5^{-3}$  B1: $5^{3n} \div 5^{2(n+1)} = 5^{-3}$	3	3
7	$P = \frac{64}{\sqrt{Q}}$  B2: $\log_2 P^2 Q = \log_2 4096$  B1: $\log_2 P + \frac{\log_2 Q}{\log_2 2^2} = \log_2 2^6$	3	3

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8 (a)	$a = 5$ $B1 : a + ar^3 = 150$	2 2	4
(b)	865 $B1 : \frac{45(3^3 - 1)}{3 - 1}$		
9	10 orang $B3 \quad n = 11$ $B2 \quad \log_{10} 38906.14 = \log_{10} 15000 + (n - 1)\log_{10} 1.1$ $B1 \quad a = 15\,000 \text{ atau } r = 1.1 \text{ atau } T_n = 38906.14$	4	4
10	$m = 15, m = -15$ (both) $B2 : -15 \text{ atau } 15$ $B1 : \frac{1}{2} m - 4 - 15 - 12 + 5m + 1  = 60$	3	3
11	$P = 2$ dan $q = -1$ (both) $B2 : p = 2 \text{ atau } q = -1$ $B1 : y - 2x = px^2 + 5q$	3	3
12	$\theta = \frac{\pi}{2} - 1$ $B2 : \frac{\pi r}{2r} = 1 + Q$ $B1 : \pi r - r\theta = 2r + r\theta$	3	3
13	94.562 $B2 : 189 - 94.438$ $B1 : 189 \text{ atau } 94.438$	3	3
14	$x = 63.43^\circ, 123.69^\circ, 243.43^\circ, 303.69^\circ$ $B2 : 63.43^\circ, 243.43^\circ \text{ atau } 123.69^\circ, 303.69^\circ$ $B1 : (2 \tan x - 3)(\tan x - 2) = 0$	3	3

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15	$\frac{t^2}{1-t^2}$ <p>B2 : <math>\tan^2 \theta = \left(\frac{t}{\sqrt{1-t^2}}\right)^2</math></p> <p>B1 : <math>\tan \theta = \frac{t}{\sqrt{1-t^2}}</math></p>	3	3
16 (a)	$5i + 2j + kj$	1	3
(b)	$k = -14, k = 10$ (both) B1 : $\sqrt{5^2 + (2+k)^2} = 13$	2	
17(a)	$i + 2j$ B1 : $\vec{PO} = \vec{PO} + \vec{OQ}$	2	4
(b)	$\frac{i+2j}{\sqrt{5}}$ B1 : $\sqrt{5}$	2	
18	Dimensi kotak untuk isipadu maksimum 68cm x 68cm x 68cm B3 $408p - 6p^2 = 0$ B2 Isipadu, $I = p^2 \times l$ B1 $2p + t = 204$	4	4
19	$k = -\frac{1}{21}, n = -7$ (both) B2 : $k = -\frac{1}{21}$ atau $n = -7$ B1 : $\frac{(3x+4)^{-7}}{-21} + c$	3	3
20	$\frac{2}{5}$ B2 : luas A = -4 dan luas B = -10 B1 : $\int_1^2 y dx = \frac{-4}{x}$ atau $\int_2^3 y dx = \frac{-4}{x}$	3	3

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21(a)	$m = 5$  $B1 : \bar{x} = \frac{2m - 3 + 8 + m + 1}{3} = 7$	2	3
(b)	15	1	
22(a)	$m = 44$  $B1 : \frac{\sum x}{15} = 9$	2	4
(b)	1529  $B1 : \text{apabila } n = 14, \sum x^2 = 3465 - 44^2$	2	
23	$\frac{9}{25}$  $B2 : \frac{36\pi}{100\pi} = \frac{36}{100}$  $B1 : \text{luas berlorek kecil} = 36\pi \text{ atau luas bulatan} = 100\pi$	3	3
24(a)	$\frac{1}{8}$  $B1 : \frac{3}{8} = \frac{1}{4} + P(M)$	2	4
(b)	$\frac{5}{8}$  $B1 : 1 - \frac{3}{8}$	2	
25(a)	0.1816	1	3
(b)	$X = 40.45$  $B1 : \frac{X - 36}{5} = 0.909$	2	

-----KERTAS JAWAPAN TAMAT -----