MATEMATIK TAMBAHAN
PERATURAN PEMARKAHAN
SET 1 KERTAS 1

NO	SKEMA	MARKAH
1	A and C B1: A OR C	**2**
2	$\frac{k+3h}{k+h}$ B2: $\frac{\log_m 3+\log_m 8}{\log_m 6}$ B1: $\log_m 2=h$ or $\log_m 3=k$ or $\frac{\log_m 24}{\log_m 6}$	**3**
3	$x = -\frac{5}{2}$ B2**:** $3x+12=-3x-3$ or equivalent B1**:** $2^{3(x+4)}=\frac{1}{2^{3x+3}}$ or equivalent	**3**
4	(a) 2,-2 (b) 3	**1** **1**
5	*Tidak, kerana hubungan fungsi songsang bukan satu dengan satu.* B2 : $f^{-1}=\pm\frac{\sqrt{y}+1}{2}$ B1: $\frac{\sqrt{y}+1}{2}$	**3** **1**
6	$m=2$ B2 : $f^2(x)=-9+16x$ B1 : $f^2(x)=ff(x)=3-4(3-4x)$	**3**
7	(a) $k<0$ (b) $h = 2$ (c) (-2, 2)	**1** **1** **1**

8	$p = 3$, $q = 2$ (both) B2 : $p = 3$ or $q = 2$ B1 : $\sqrt{(3)^2 - 4(4)(-q)} = \sqrt{41}$	**3**
9	$p = 3$ *and* $q = 432$ $B2 : p = 3$ @ $q = 432$ $B1 : A(x) = -48(x-3)^2 + 432$	**3**
10	$x = 120°, 150°, 300°, 330°$ B3: $240°, 300°$ *or* $600°, 660°$ B2: Seen $60°$ B1: $\sin 2x = -0.8666$	**4**
11	$h = 7$ B2 : $h = -4$ *atau* $h = 7$ B1 : $4x - x^2$	**3**
12	(a) $x = 0$ (b) 5040 B1: 7!	**1** **2**
13	(a) 1 (b) $10\log_{10} k + 45$ B1 : $\frac{10}{2}\left[2(\log_{10} k) + (10-1)1\right]$	**1** **2**
14	2186 B2 : $S_7 = \frac{2(3^7 - 1)}{3-1}$ B1 : $r = 3$	**3**

15	$k \neq 3$, $k \neq -3$ (Both) B1: $\frac{k}{\frac{k^3}{9}} \neq 1$ 90 B1: $S_2 = \frac{81\left(1-\left(\frac{1}{9}\right)^2\right)}{1-\frac{1}{9}}$	**2** **2**
16	$m = 8$ and $n = 5$ B2: $m = 8$ or $n = 5$	**3**
17	Ya . Air tersebut akan melimpah kerana <u>isipadu air >196 ml.</u> B2 : $0.196l @ 196ml$ *or* $\frac{25}{2}$ B1 : $\left[\frac{5y^2}{2}\right]$	**3**
18	$k = \frac{1}{4}$ dan $n = 4$ B3 : $k = \frac{1}{4}$ atau $n = 4$ B2 : $n\left(\frac{1}{4}\right) = 1$ B1: $q = \frac{3}{4}$ atau $p = \frac{1}{4}$	**4**

19	(a) $\frac{y}{x}$ (b) $a = 13,\ b = 2$ B2 : $1 = -2(6) + a$ B1 : $m = -2$	**1** **3**
20	(a) $-\frac{1}{3}$ (b) $(4,\ 1)$ B1 : $5t - 4 = -\frac{1}{5}t + 10$ OR t=4 or v=4	**1** **2**
21	B3 : 5.745 B2 : $\sigma = \sqrt{\frac{1368}{12} - 9^2}$ B1 : $6^2 = \frac{\sum x^2}{11} - 9^2$ OR $\bar{x}_{\text{new mean}} = 9$	**3**
22	(a) mean = 6.2minutes mode = 5.3minutes median = 5.5minutes } *any 2 correct* (b) Median Extreme value exist	**1** **1** **1**
23	(a) $3\underline{i} + 6\underline{j}$ (b) $m = 1$ B2 : $k = -\frac{2}{3}$ B1 : $\begin{pmatrix} m-3 \\ 4-8 \end{pmatrix} = k\begin{pmatrix} -3+6 \\ 4+2 \end{pmatrix}$ $\overrightarrow{PQ} = k\overrightarrow{PR}$	**1** **3**

24	$\frac{1}{9}$ B3 : $\frac{\frac{1}{9}\pi r^2}{\pi r^2}$ B2 : $\frac{1}{9}\pi r^2$ B1 : πr^2 or $\frac{1}{81}\pi r^2$	**4**
25	11.79 cm^2 B2 : $2\left(\frac{1}{2}\times 4^2 \times \sin 2.313\right)$ B1 : $\frac{2\pi - 1.658}{2} = 2.313$	**3**