PRAKTIS BESTARI

PROJEK JAWAB UNTUK JAYA (JUJ) 2017

SIJIL PELAJARAN MALAYSIA 3472/1

ADDITIONAL MATHEMATICS

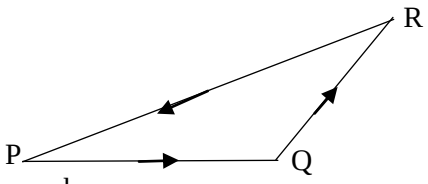
Kertas 1 / Set 1

PERATURAN PEMARKAHAN

Peraturan Pemarkahan ini mengandungi 5 halaman bercetak

PERATURAN PEMARKAHAN SET 1 KERTAS 1			
No	**Peraturan Pemarkahan**	**Markah**	**Jumlah Markah**
1	$-5, 5$ *and* 10 B1 : $2(-3)^2+(-3)-5$ or $2(0)^2+(0)-5$ or $2(2)^2+(2)-5$		2
2	$m=10$ and k = 3 B2 : $m=10$ or k = 3 B1 : $f^{-1}(x)=\dfrac{m}{x+3}$		3
3	(a) $g(x)=x+2$ B1 : $\dfrac{1}{g(x)-5}=\dfrac{1}{x-3}$ *or* $h^{-1}(x)=\dfrac{1+5x}{x}$ (b) - 4	2 1	3
4	$p<-\dfrac{3}{4}$ B1: $(-3)^2-4(3)(-p)<0$	2	2
5	$x=2$ and $x=1.077$ B3: $x=2$ or $x=1.077$ B2 : $x=\dfrac{-(-160)\pm\sqrt{(-160)^2-4(52)(112)}}{2(52)}$ B1: $(16-2x)(10-2x)x=4x^3+112$ or $52x^2-160x+112=0$		4
6	$m=5$ and $n=-1$ B1 : $m=5$ or $n=-1$		2
7	x = 27 B2 : $\log_3 x=3$ B1 : $4^{\log_3 x}=4^3$		3
8	$\dfrac{9}{5}$ B2: $\dfrac{2t-3}{3t}=\dfrac{1}{9}$ B1 : $\log_3\left(\dfrac{2t-3}{3t}\right)=-2$		3

9	$\log_{\frac{1}{a}} = -x$ B2 : $\dfrac{\log_a b}{-\log_a a}$ B1 : $\dfrac{\log_a b}{\log_a a^{-1}}$		3
10	21 B3: $T_{11} = 1+10(2)$ OR $\dfrac{11}{2}[1+l] = 121$ B2: $\dfrac{n}{2}[2(1)+(n-1)(2)] = 121$ B1: $\dfrac{0.0484}{0.02\times 0.02} = 121$		4
11	r = 5 , r = -2 B2 : (r-5) (r+2) = 0 B1 : $r^2 - 3r - 10 = 0$ or $\alpha r^2 - 3\alpha r = 10\alpha$		3
12	a) $\log_{10} y = -5\log_{10} x + \log_{10} P$ b) $p = 0.01$ and $m = -5$ B1 : $\log_{10} p = -2$	1 2	3
13	(a) $p = \dfrac{q}{2}$ B1: $\dfrac{-2p}{q} = -1$ (b) $x - 2y + 3 = 0$ B1: $\dfrac{-2p}{2} = -1$ or $p = 1$	2 2	4

14	(a)  B1: Tiada anak panah (b) $-3\underset{\sim}{u}+\underset{\sim}{v}$ B1 : $-\underset{\sim}{u}-3\underset{\sim}{v}+(-2\underset{\sim}{u}+4\underset{\sim}{v})$	2 2	4
15	7π or 21.994 B2 : $r=5$ or $5\left(\frac{3}{5}\pi\right)$ or $5\left(\frac{7}{5}\pi\right)$ B1 : $\frac{1}{2}\times r^2\times\left(\frac{3}{5}\pi\right)=7.5\pi$ or $2\pi-\frac{3}{5}\pi=\frac{7}{5}\pi$	3	3
16	a) $\frac{1}{k}$ B1 : $kosek\theta=\frac{1}{\sin\theta}$ b) k	2 1	3
17	$x=6.26°, 153.74°$ B3 : $x=6.26°$ or $x=153.74°$ B2 : $\frac{1}{2}x-40°=36.87°$ or $\frac{1}{2}x-40°=-36.87°$ B1 : $\frac{1}{kos\ \theta}=\frac{5}{4}$		4
18	$\partial y=4p$ B2 : $\frac{\partial y}{p}=\frac{16}{(2)^2}$ B1 : $\frac{dy}{dx}=\frac{16}{x^2}$ or $\partial x=p$	3	3

19	$A = \frac{64}{3} unit^2$ B2: $2\int_{-2}^{2} 4 - y^2 dy$ B1: $y = 2$ and $y = -2$	3	3
20	(a) 15 (b) -30 B1: $2g(x)$ or $2(15)$ or 30	1 2	3
21	a) $\mu = 61$ and $\sigma = 3.6$ B1 : $\sigma = 3.6$ or $\mu = 61$ b) 55.8 B1: 60.8 x 52	2 2	4
22	$p = 7$ M = 35.5 B1 : $M = 30.5 + \left(\frac{20.5 - 17}{7}\right)10$	1 2	3
23	a) 150 B1 : ${}^6C_2$ x ${}^5C_2$ b) 60 B1 : ${}^5C_3$ x ${}^6C_1$	2 2	4
24	a) $\frac{12}{35}$ B1 : $\frac{4}{7} \times \frac{3}{5}$ b) $\frac{29}{35}$ $1 - \left(\frac{3}{7} \times \frac{2}{5}\right)$ or $\left(\frac{4}{7} \times \frac{2}{5}\right) + \left(\frac{3}{7} \times \frac{3}{5}\right) + \frac{12}{35}$	2 1	3
25	$\mu = 44$ *and* $\sigma = 12$ B3 : $\mu = 4$ or $\sigma = 12$ B2 : $65 - \mu = 1.75(\mu - 32)$ or $\frac{32 - \mu}{\sigma} = -1$ or $\frac{65 - \mu}{\sigma} = 1.75$ B1 : $P(Z > \frac{65 - \mu}{\sigma}) = 0.0401$ or $P(Z > \frac{32 - \mu}{\sigma}) = 0.1587$	4	4