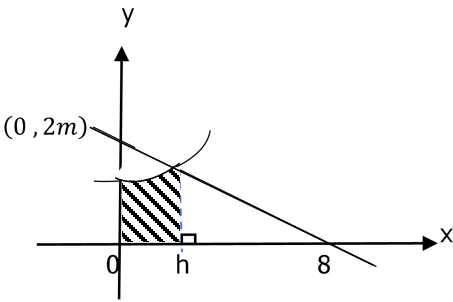
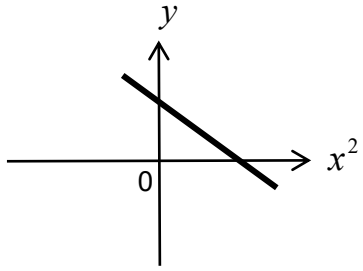


SKEMA PAPER 1 Kertas 1 (PPC MT T5 2021)

N O	SKEMA	MARKA H
1	(a) Selesaikan $-21 = -3a - (2a - 4)$ $a = 5$ dan $b = 6$ (b) $*5x - *6 = x$ $\frac{3}{2}$	K1 N1 K1 N1
2	(a) $h(x) = \frac{x^2 + 3}{4}$ (b) $0 \leq x \leq 3$ (c) $\frac{p}{2}$	N1 N1 N1
3	(a) $(10 - 1)!$ $362\ 880$ (b) $(5 - 1)! \times 6!$ $*362880 - 17280$ $345\ 600$	K1 N1 K1 K1 N1
4	(a) ${}^nC_n(0.98)^n(0.02)^0 > 0.6099$ $n \log_{10} 0.98 > \log 0.6099$ $n = 24$ (b) $P(Z > m) = 0.1$ or $1 - 2P(Z > m) = 8P(Z > m)$ $P(Z < m) = 0.9$ $m = 1.281$ or 1.282	K1 K1 N1 K1 K1 N1
5	(a) $\theta = 0.6947$ // 0.6948 // 0.6949 rad (b) $6(2 \times *0.6948)$ 8.3376 (c) Luas $\triangle EDA = \frac{1}{2}(10)(12)$ or Luas $\triangle COA = \frac{1}{2}(6)(6)\sin[\pi - (2 \times *0.6948)]$ Luas sector $COD = \frac{1}{2}(6)^2(2 \times *0.6948)$ 17.28	N1 K1 N1 K1 K1 N1

6	(a) kamirkan $9x - \frac{x^3}{6(3)}$ guna limit $-\sqrt{3}$ dan $\sqrt{3}$ 30.60 (b) (i)  (ii) $\frac{1}{2}(3m)(h) - 6$ $\frac{-2m}{8} = \frac{m-0}{h-8}; h = 4$ $6m - 6$	K1 K1 N1 N1 K1 N1
7	(a) $-2x^2 - x + 6$ $-2\left(x - \frac{3}{2}\right)(x + 2)$ (b) (i) Kelebaran graf semakin berkurang (ii) $x = 2$ $(2, 21)$	K1 N1 N1 K1 N1
8	(a) Titik tengah $(5, 5)$ dan kecerunan $\frac{1}{3}$ $\frac{t-5}{2-5} = -3$ OR $t = -3(2) = 20$ $t = 14$ (b) $PR = \frac{1}{2}QR$ or $2PR = QR$ $\sqrt{(x-1)^2 + (y-0)^2}$ or $\sqrt{(x-2)^2 + (y+3)^2}$ $3x^2 + 3y^2 - 4x - 6y - 9 = 0$	K1 K1 N1 K1 K1 N1

9	(a) $\vec{k} = m \begin{pmatrix} -1 \\ 2 \end{pmatrix}$ $\sqrt{(-m)^2 + (2m)^2} = 5$ $\vec{k} = \sqrt{5} \begin{pmatrix} -1 \\ 2 \end{pmatrix} \text{ or } \vec{k} = -\sqrt{5} \vec{i} + 2\sqrt{5} \vec{j}$ (b) (i) $\vec{OY} = \vec{OP} + \vec{PY}$ $\vec{OY} = 25\vec{i} + 10\vec{j} + t(-4\vec{i} + 4\vec{j})$ $\vec{OY} = (25 - 4t)\vec{i} + (10 + 4t)\vec{j}$ ii) $\vec{OX} = \vec{OY}$ (melanggar) $6t\vec{i} + 8t\vec{j} = (25 - 4t)\vec{i} + (10 + 4t)\vec{j}$ $6t = 25 - 4t \text{ or } 8t = 10 + 4t$ $t = 2.5 \text{ jam}$	K1 N1 K1 N1 K1 N1
10	(a) Tukar asas $\frac{\log_2(2-x)}{\log_2 \sqrt{2}}$ or $\frac{\log_{\sqrt{2}}(x^2-4)}{\log_{\sqrt{2}} 2}$ Guna hukum log $\log x + \log y = \log xy \text{ or } \log x - \log y = \log \frac{x}{y}$ selesaikan persamaan kuadratik $(x-2)(x+6) = 0$ $x = -6$ (b) $\frac{3+\sqrt{3}}{2+\sqrt{3}} \times \frac{2-\sqrt{3}}{2-\sqrt{3}}$ $3 - \sqrt{3}$	K1 K1 K1 N1 K1 N1
11	$\tan\left(\frac{60}{2}\right) = \frac{1 - \sin 60}{\cos 60}$ $\frac{1 - \frac{\sqrt{3}}{2}}{\frac{1}{2}}$ $2 - \sqrt{3}$ guna $\cos^2 A = 1 - \sin^2 A$ $A = 90, 180, 360$ # minta maaf..soalan ini ada kesilapan, apabila ganti balik, jawapan tidak memenuhi persamaan..	K1 N1 K1 N 0,1,2

12	(a) $2p^2 + (n-1)(3p^2) = 92p^2$ $n = 31$ (b) $a + 8d = 36$ or $\frac{19}{2}[2a + 18d] = 760$ $a = 4$ dan $d = 4$ $\frac{24}{2}[2(*4) + 23(*4)] - 760$ 440	K1 N1 K1 N1 K1 N1
13	$40 \times \frac{4}{3}\pi x^3$ or $60 \times \frac{4}{3}\pi y^3$ $V = 40 \times \frac{4}{3}\pi x^3 + 60 \times \frac{4}{3}\pi y^3$ $V = 40 \times \frac{4}{3}\pi x^3 + 60 \times \frac{4}{3}\pi(15-x)^3$ or $V = 40 \times \frac{4}{3}\pi(15-y)^3 + 60 \times \frac{4}{3}\pi y^3$ Bezakan $160\pi x^2 + 80\pi(3)(15-x)^2(-1)$ $0 = 160\pi x^2 + 80\pi(3)(15-x)^2(-1)$ $\frac{-(-90) \pm \sqrt{(-90)^2 - 4(1)(675)}}{2(1)}$ $x = 8.26$ $y = 6.74$	P1 K1 K1 K1 K1 K1 N1 N1
14	(a)  $a < 0$ dan $b > 0$ <i>Kecerunan negatif</i> <i>Pintasan-y positif</i> a= kecerunan graf b= pintasan -y (b) Ganti $(-4, 0)$ $0 = (-4)^2 + m(-4)$ $m = 4$ $\frac{y}{x} = x + m$ $-5 = p + *4$ or $k = -2 + *4$ $p = -9$ dan $k = 2$	N1 N1 N1 K1 N1 P1 K1 N1

15	$0.1x + 0.4y + 0.6z = 225$ $x + y + z = 500$ $x = 2y$ <i>Hapuskan pembolehubah z</i> $5x + 2y = 750$ <i>Hapuskan pembolehubah x or y</i> $5(2y) + 2y = 750 \text{ or } 5x + 2\left(\frac{x}{2}\right) = 750$ $x = 125$ $y = 62.5$ $z = 312.5$	N1 N1 N1 K1 K1 N1 N1 N1
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TAMAT