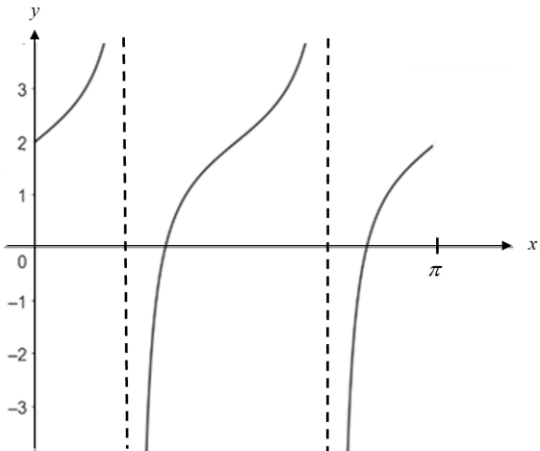
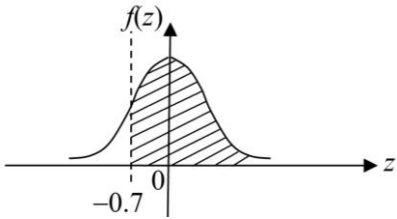


MODUL PINTAS 2025 MATEMATIK TAMBAHAN
PERATURAN PEMARKAHAN TINGKATAN 5 KERTAS 1

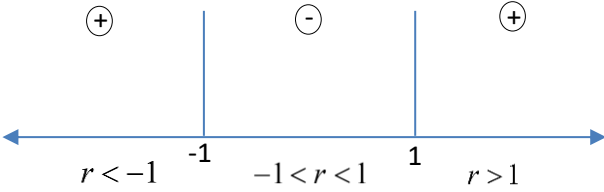
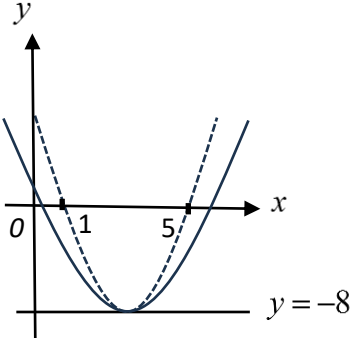
SOALAN			PEMARKAHAN	SUB MARKAH	MARKAH
1	(a)		$\frac{1}{2}x + 4 = -\frac{1}{2}x + 2$ @ setara	K1	
			$B(-2, 3)$	N1	
			$\left(\frac{1(-2) + 2(x)}{2+1}\right) = -2$ @ $\left(\frac{1(-1) + 2(y)}{2+1}\right) = 3$	K1	
			$N(-2, 5)$	N1	
	(b)		$y - (-1) = -\frac{1}{2}[x - (-2)]$ @ setara	K1	
			$y = -\frac{1}{2}x - 2$	N1	
					6
2	(a)		$h'(x) = 3(1 - 2x)^2(-2)$	K1	
			$h'(1) = -6(1 - 2(1))^2$	K1	
			-6	N1	
	(b)		$\frac{dy}{dx} = 3 - \frac{4}{x^2}$	K1	
			$3 - \frac{4}{(2)^2}$	K1	
			$2 \times (-3)$	K1	
			-6	N1	
					7

3			$b = -2k$ @ $a = k - 4$	K1	
			$b = -2(a + 4)$	K1	
			$a = \frac{-b-8}{2}$	N1	
					3
4			Hasil darab semua sebutan untuk menghapuskan satu anu @ Ungkapkan x dalam sebutan y dan z @ Ungkapkan y dalam sebutan x dan z @ Ungkapkan z dalam sebutan y dan x	P1	
			Hapus anu pertama dengan penghapusan @ penggantian	K1	
			Hapus anu kedua dengan penghapusan @ penggantian	K1	
			$x = 3$ @ $y = -2$ @ $z = 4$	N1	
			$y = -2$ & $z = 4$ @ $x = 3$ & $z = 4$ @ $x = 3$ & $y = -2$	N1	
					5
5	(a)		 Bentuk graf tangen 2 kitaran lengkap	P1 P1	

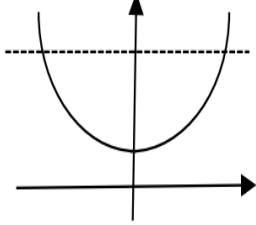
			Translasi graf sebanyak 2 unit ke atas	P1	
	(b)		$\frac{\pi}{9}$	N1	
					4
6	(a)		$\frac{L}{\theta} = \frac{\pi j^2}{2\pi}$ atau setara	K1	
			$L = \frac{1}{2} j^2 \theta$	N1	
	(b)		$\frac{1}{2}(12)(16)\sin\left(\cos^{-1}\frac{12}{16}\right)$ atau $\frac{1}{2}(12)(\sqrt{16^2 - 12^2})$ setara ATAU $\frac{1}{2}(16)^2 \left[\left(\cos^{-1}\frac{12}{16} \right) \times \frac{3.142}{180} \right]$ atau setara	K1	
			$2 \left[\frac{1}{2}(12)(16)\sin\left(\cos^{-1}\frac{12}{16}\right) \right] +$ $\frac{1}{2}(16)^2 \left[\left(\cos^{-1}\frac{12}{16} \right) \times \frac{3.142}{180} \right]$	K1	
			219.52	N1	
					5
7	(a)		3	N1	
	(b)	(i)	$-5 \leq 2x - 5 \leq 5$	K1	
			$0 \leq x \leq 5$	N1	
		(ii)			

			Bentuk V Titik $(0,5), \left(\frac{5}{2}, 0\right)$ dan $(5,5)$ di plot	P1 P1	
					5
8	(a)		0.1875	P1	
	(b)	(i)	$\frac{X - 55}{10} = 0.5$	K1	
			60	N1	
		(ii)	$P\left(z > \frac{48 - 55}{10}\right)$	K1	
			 & $1 - P(z > 0.7)$	K1	
			75.80	N1	
					6
9	(a)		$\frac{1}{2}C_0 = C_0e^{-0.15t}$	K1	
			$\ln e^{-0.15t} = \ln \frac{1}{2}$	K1	
			$t = 5$	N1	
	(b)		$AB^2 = (\sqrt{6})^2 + \left(\frac{\sqrt{2}}{\sqrt{3} + \sqrt{2}}\right)^2 @ \text{ setara}$	P1	
			Darab Konjugat $\left(\frac{2}{5 + 2\sqrt{6}} \times \frac{5 - 2\sqrt{6}}{5 - 2\sqrt{6}}\right) @ \text{ setara}$	K1	

			$Y_a \ \& \ AB = \sqrt{16 - 4\sqrt{6}}$	N1	
					6
10	(a)		$y = \frac{4}{2}x^2 + 9x + c$	K1	
			Ganti $(2, -3)$ ke dalam $y = \frac{4}{2}x^2 + 9x + c$ & selesaikan c	K1	
			$y = 2x^2 + 9x - 29$	N1	
	(b)	(i)	9	N1	
		(ii)	$2 \int_1^3 f(x) \, dx \ @ \ \int_1^3 7 \, dx - 2 \int_1^3 f(x) \, dx$	P1	
			$[7x]_1^3 \ \& \ [7(3) - 7(1)]$	K1	
			6	N1	
					7
11	(a)		$p = -1$	P1	
	(b)		$(-8)^2 - 4(-1)q = 0$	K1	
			$q = -16$	N1	
					3
12	(a)		$240 = x + (3-1)(20)$	K1	
			$T_6 = (200) + (6-1)20$	K1	
			300	N1	

	(b)	$10320 = \frac{n}{2}[2(200) + (n-1)(20)] @$ $10320 = \frac{n}{2}[2(2100) + (n-1)(400)]$	K1	
		$20n^2 + 380n - 20640 = 0$ & $400n^2 + 3760n - 20640$ dan selesaikan	K1	
		24 bulan & 3 tahun 11 bulan @ setara	N1	
		Pelan A & 24 bulan < 3 tahun 11 bulan @ setara	N1	
				7
13	(a)	$2^2 - 4r(r) < 0$	K1	
		Titik ujian -3: $(-3+1)(-3-1) > 0$ Titik ujian 0: $(0+1)(0-1) > 0$ Titik ujian 3: $(3+1)(3-1) > 0$ 	K1	
		$r < -1, r > 1$	N1	
	(b) (i)		N1	
	(ii)	$f(x) = 2 \left[x^2 - 2mx + \left(\frac{-2m}{2} \right)^2 - \left(\frac{-2m}{2} \right)^2 + m^2 + n \right]$	K1	
		$f(x) = 2(x-m)^2 + 2n$	N1	

			$2n = -8 @ m = \frac{1+5}{2}$	K1	
			$m = 3 \text{ \& } n = -4$	N1	
					8
14	(a)		$\overrightarrow{DY} = \lambda \overrightarrow{DT} @ \ a + 6b = \lambda \left(\frac{3}{2}a + 9b \right)$	K1	
			$1 = \frac{3}{2}\lambda @ \ 6 = 9\lambda$	K1	
			$\lambda_1 = \lambda_2 @ \ \overrightarrow{DY} = \frac{2}{3}\overrightarrow{DT} @ \text{ setara}$	N1	
			Garis lurus melalui titik Y @ setara	N1	
	(b)	(i)	$\overrightarrow{UR}$	N1	
		(ii)	$\sqrt{75} @ \text{ setara}$	N1	
			$\frac{\left(-5 - \frac{5}{2}\right)\hat{i} + \left(0 - \frac{5\sqrt{3}}{2}\right)\hat{j}}{\sqrt{75}}$	K1	
			$-\frac{\sqrt{3}}{2}\hat{i} - \frac{1}{2}\hat{j}$	N1	
					8
15	(a)		$y = \frac{k+x}{3x}$	K1	
			$f(x) = \frac{k}{3x-1}, x \neq \frac{1}{3}$	N1	
	(b)		$\frac{k}{3(1)-1} = 4 \left[\frac{2}{3(\sqrt{2})^2 + 2} \right]$	K1	
			$k = 2$	N1	
	(c)		$\frac{2}{3g(x)-1} = \frac{2}{3x^2 + 2}$	K1	

			$g(x) = x^2 + 1$	N1	
			<i>Ujian garis mengufuk</i> 	N1	
			Tidak wujud & Garis mengufuk memotong graf pada 2 titik.	N1	
					8

