AHMED HAMED	ALY		25100
Question 1:			
about I for J(=c) = tax	Λ×		
		. Ty	
y=f'(a)(x-a) +f(a)			
$y = f'\left(\frac{\pi}{3}\right)\left(x - \frac{\pi}{3}\right) + f\left(\frac{1}{3}\right)$	3)	g(x): ton x	
$y' = \frac{1}{\cos^2\left(\frac{\pi}{3}\right)} \left(x - \frac{\pi}{3}\right) + \frac{1}{3}$		$g'(x) : Sec^2$	
y' cost (3)		1/22	
$y = 4(x - \frac{\pi}{3}) + \sqrt{3}$		1605	
Question 2:	("/)	(41	,
$\rho(x) = f(\pi) + f'(\pi)(x - \pi) +$	2!	$\frac{t}{3!} \frac{(\pi)}{(x-\pi)^3}$	
f(x) = Sin(2x)			
f'(xc) = 2 Cos(2xc)	ν		-
$f'(x) = -4 \sin(2x)$			
f"(=x) = - 8 (ws (2x)	4	9 ° '	
$\int_{0}^{\infty} (\pi) = -8\cos(2x)$			
31 31	3		
	4.	. 7	
Question 3:	· · · · · · · · · · · · · · · · · · ·		
f(x) = f(-3) + f'(-3)(x+3)	$+ \frac{f''(-3)}{2!} (x$	$+3)^2 + f''(-3)$	$(x+3)^3$
$f(x) = (x+1)^{-2}$	۷:	2;	-
			7
$f'(x) = -\frac{2}{(x+1)^3}$ $f''(x) = \frac{6}{(x+1)^4}$ $f'''(x) = \frac{2^4}{(x+1)^4}$			
$f''(x) = -\frac{24}{5}$	F"(-3)	$-\frac{24}{(x+1)}$	
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