

Subject:

$$Dy = \left[\frac{1}{x} + \frac{1}{x^2} + \frac{1}{x^3} \right]$$

الف) $y = \sqrt{\left[x - \frac{1}{x} \right] + \left[x + \frac{1}{x} \right] + \left[x - \frac{1}{x} \right] + \left[x + \frac{1}{x} \right]} \Rightarrow 0$ X

ب) $y = \left[x - \frac{1}{x} \right] + \left[-x + \frac{1}{x} \right]$ X $Dy = \left[x \mid x = k + \frac{1}{x} \right] \Rightarrow k \in \mathbb{Z}$

$\left[x - \frac{1}{x} \right] + \left[-x + \frac{1}{x} \right] \Rightarrow 0$ $Dy = R - \left[\frac{1}{x} + \frac{1}{x} \right]$

الف) $y = \frac{1}{x \sin x - 1} \rightarrow x \sin x - 1 \neq 0$ X $Dy = R - \left[\frac{1}{x} + \frac{1}{x} \right]$

ب) $y = \frac{\cot x + 1}{\tan x + 1} \rightarrow (\cot x + 1) \neq 0$ X $Dy = \left[k \cot x + \frac{1}{x} \right]$

الف) $\left(x \sin x - 1 \right) \rightarrow \sin x \neq \frac{1}{x}$ X $Dy = \left[k \cot x + \frac{1}{x} + \frac{1}{x} \right]$

ب) $\sqrt{1 - x} \cos x \rightarrow \sqrt{1 - x} \cos x \neq 0$ $Dy = \left[x \cot x + \frac{1}{x} + \frac{1}{x} \right]$