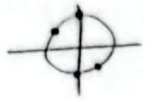
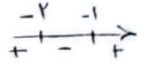


ا) $\tan x \neq -1$ $\cos x \neq 0$ $D_f = \mathbb{R} - \left\{ k\pi + \frac{\pi}{4}, k\pi - \frac{\pi}{4} \right\}$ 	
ب) $1 \geq \epsilon \sin^2 x \rightarrow \sin^2 x \leq \frac{1}{\epsilon} \rightarrow -\frac{1}{\sqrt{\epsilon}} \leq \sin x \leq \frac{1}{\sqrt{\epsilon}}$ $D_f = \left[k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4} \right]$ 	6
الف) $\sin x \geq \frac{1}{\sqrt{e}}$ $D_f = \left[2k\pi + \frac{\pi}{4}, 2k\pi + \frac{3\pi}{4} \right]$ ب) $\cos x \leq \frac{1}{\sqrt{e}}$ $D_f = \left[2k\pi + \frac{\pi}{4}, 2k\pi + \frac{5\pi}{4} \right]$	7
الف) $-1 \leq x^2 + 3x + 1 \leq 1 \rightarrow 0 \leq x^2 + 3x + 2 \rightarrow x \leq (x+1)(x+2) \Rightarrow (-\infty, -2] \cup [1, +\infty)$ $x(x+3) \leq 0 \rightarrow [-3, 0]$ $D_f = [-3, -2] \cup [-1, 0]$ 	8
ب) $\sqrt{0-x} \leq 1 \rightarrow 0-x \leq 1 \rightarrow x \geq -1 \rightarrow x \geq -1$ $D_f = [-1, \infty)$ $0-x \geq 0 \quad x \leq 0 \quad x \in [-1, 0]$	
الف) $x > 0$ $1 - \log_{\frac{1}{2}} x > 0 \rightarrow 1 > \log_{\frac{1}{2}} x \rightarrow x < 2 \rightarrow D_f = (0, 2)$ ب) $x > 0$ $1 > \log_{\frac{1}{2}} x \rightarrow x > \frac{1}{2} \rightarrow D_f = \left(\frac{1}{2}, +\infty \right)$	9
الف) $\epsilon x - x^2 \geq 3$ $x^2 - \epsilon x + 3 \leq 0$ $\frac{1}{+} \frac{-}{-} \frac{3}{+}$ $D_f = [1, 3]$ ب) $\frac{x_n + 5}{x_n + 4} \in \mathbb{W}$ $x \in \frac{(\mathbb{W} - 5)}{x - 4}$ $D_f = \left\{ x \mid x = \frac{5 - \epsilon k}{x - 4}, k \in \mathbb{W} \right\}$	10