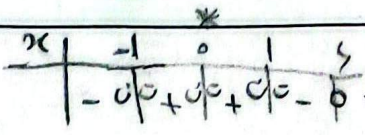
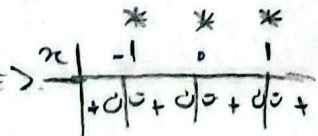


الف) $\sqrt{\frac{x^2-5x}{x^3-x}} \Rightarrow \frac{x(x-5)}{x(x+1)(x-1)} \geq 0 \Rightarrow$  $\Rightarrow D_f = (-1, 0) \cup (0, 1) \cup [5, +\infty)$ ب) $\sqrt{\frac{x^2-x^3}{x^3-x}} \Rightarrow \frac{x^2(x-1)(x-1)}{x(x+1)(x-1)} \geq 0 \Rightarrow$  $\Rightarrow D_f = \mathbb{R} - \{-1, 0, 1\}$	1
الف) $x + x > 0 \Rightarrow x > -x \Rightarrow D_f = \mathbb{R}^+$ ب) $x x > 0 \Rightarrow x \neq 0 \wedge x \neq 0 \Rightarrow D_f = \mathbb{R}^+$	2
الف) $2 - [x] \geq 0 \Rightarrow [x] \leq 2 \Rightarrow D_f = (-\infty, 2)$ ب) $2 - [x] > 0 \Rightarrow 2 > [x] \Rightarrow D_f = (-\infty, 2)$	3
الف) $[x - \frac{1}{p}] + [x + \frac{1}{p}] \geq 0 \Rightarrow D_f = \mathbb{R}^+$ ب) $[x - \frac{1}{p}] + [\frac{1}{p} - x] \geq 0 \Rightarrow D_f = \mathbb{R}$	4
الف) $\sin x - 1 \neq 0 \Rightarrow \sin x \neq 1 \Rightarrow D_f = [\mathbb{K}\pi - \frac{\pi}{2}]$ ب) $2 \sin^2 x - 1 \neq 0 \Rightarrow 2 \sin^2 x \neq 1 \Rightarrow \sin^2 x \neq \frac{1}{2}$ $\Rightarrow D_f = [\mathbb{K}\pi + \frac{\pi}{4}]$	5

الف) $2 \sin x - 1 \geq 0 \Rightarrow \sin x \geq \frac{1}{2} \Rightarrow D_f = [2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6}]$	
ب) $\cos x - 1 \geq 0 \Rightarrow \cos x \geq 1 \Rightarrow D_f = [2k\pi]$	6
الف) $-1 \leq -2 x \leq 1 \Rightarrow 2 \leq x \leq 4 \Rightarrow D_f = [2, 4] \cup [-4, -2]$	
ب) $-1 \leq x^2 + 2x + 1 \leq 1 \Rightarrow x^2 + 2x + 1 \geq 0 \Rightarrow x \leq -2 \vee x \geq 0$ $\Rightarrow x^2 + 2x \leq 0 \Rightarrow -2 \leq x \leq 0$ $\Rightarrow D_f = [-2, -2] \cup [0, 0]$	7
الف) $2 - \log_p x^{-2} \geq 0 \Rightarrow \log_p x^{-2} \leq 2 \Rightarrow x^{-2} \leq p^2 \Rightarrow x \leq 11$ $\vee x^{-2} > 0 \Rightarrow x > 2 \Rightarrow D = 11 \geq x > 2$	
ب) $x^3 - x > 0 \Rightarrow x(x+1)(x-1) > 0 \Rightarrow$  $\Rightarrow D_f = (-1, 0) \cup (1, \infty)$	8
الف) $x^2 \neq -1 \Rightarrow D_f = \mathbb{R}$	
ب) $x^2 \neq 1 \Rightarrow D_f = \mathbb{R} - \{0\}$	
ج) $x^2 \neq 2 \Rightarrow D = \mathbb{R} - \{\frac{1}{2}\}$	
د) $x^2 \neq 2 \Rightarrow D_f = \mathbb{R} - \{1, 2, \frac{1}{2}\}$	9
الف) $\{x+1\} \subset W \Rightarrow x \in \frac{W+1}{f} \Rightarrow D_f = \{x \mid x = \frac{k+1}{f}, k \in W\}$	
ب) $fx - 2 = 2xw - 2w$ $fx = 2wx - 2w + 2$ $x = \frac{2wx - 2w + 2}{f}$ $\Rightarrow D_f = \{x \mid x = \frac{2wk - 2w + 2}{f}, k \in W\}$	10

اميرنا جتبي