

→ K510

$$a^r + a - r = 0$$

$$(a+1)(a-1) 50$$

~~$5s + r$~~ , $(5s + r)$ $\rightarrow f(1)5 + r5(1)$

شهادت دومین شهید محراب آیت الله مدنی به دست منافقان (۱۳۶۰ هـ ش)

$$f(x) = \begin{cases} x^2 - b; & |x+1| \gg 1 \\ a + 2x; & -3 \leq x \leq -1 \end{cases}$$

$$\rightarrow \text{ار } x_5 = -3 \rightarrow 2(-3)^2 - 6 = a + 2(-3)$$

$$\rightarrow 1 - b = a - 4 \rightarrow a + b \leq 5$$

$$y = \sqrt{4x-a} + \sqrt{b-3x} \rightarrow b-3x \geq 0 \rightarrow 3x \leq b \rightarrow x \leq \frac{b}{3} \quad - \text{I}$$

$$\rightarrow 4x-a \geq 0 \rightarrow 4x \geq a \rightarrow x \geq \frac{a}{4}$$

$$\rightarrow \frac{a}{4} \leq \frac{b}{3} \leq 1 \rightarrow a \leq 12, b \leq 4 \rightarrow \frac{b}{a} \leq \frac{1}{3}$$

الف) $y \leq \sqrt{\frac{x+1}{|x+3|}} + \sqrt{\frac{4-x}{x^2+2x+4}} \rightarrow x \leq 4$ - د

$\sqrt{\frac{x+1}{|x+3|}}$ $\rightarrow x+1 \geq 0 \rightarrow x \geq -1$

$\Delta > 0 \rightarrow$ دالة موجبة

$\Delta > 0$

$\rightarrow Df \leq [-1, 4] - \{3\}$

ب) $\sqrt{[x]-4} + \sqrt{4-[x]}$

$[x]-4 \geq 0 \rightarrow [x] \geq 4 \rightarrow x \geq 4 \rightarrow Df \leq \emptyset$

$4-[x] \geq 0 \rightarrow [x] \leq 4 \rightarrow x < 5$

الف) $y \leq \sqrt{\frac{x^2(x-4)}{x^4-12x^2+36}} = \sqrt{\frac{(x-2)(x+2)}{(x-1)(x+1)(x-3)(x+3)}}$ - د

$Df \leq \mathbb{R} - \{[-3, 3] \cup \{0\}\}$

ب) $y = \sqrt{\frac{(x-1)(x-3)(x+2)}{(x+1)(x+3)(x-2)}}$

$Df \leq (-\infty, -3) \cup [-2, -1) \cup [1, 2) \cup [3, +\infty)$

$$\text{جاء) } y \leq \sqrt{[-x] - 2} \rightarrow [-x] \geq -2 \rightarrow -x \geq -2$$

$$\rightarrow x \leq 2$$

$$\rightarrow \text{Df} \leq (-\infty, 2]$$

$$\text{جاء) } y = \frac{2x^2 + 4}{[x]^2 - 2[x] - 3} \rightarrow \text{مقسوم عليه}$$

$$[x]^2 - 2[x] - 3 \rightarrow ([x] - 3)([x] + 1)$$

$$([x] \neq 3) \quad ([x] \neq -1)$$

$$\rightarrow [x] \neq 3 \rightarrow x \notin [3, 4)$$

$$\rightarrow \text{Df} \leq (-\infty, -1) \cup (0, 3) \cup [4, \infty)$$

$$[x] \neq -1 \rightarrow x \notin [-1, 0)$$

$$\text{جاء) } y \leq \frac{\cos x}{\sin x} + 1 \rightarrow \sin x \neq 0$$

$$\frac{\sin x}{\cos x} + 1 \rightarrow \cos x \neq 0 \rightarrow \tan x \neq -1$$

$$\text{Df} \leq \mathbb{R} - [k\pi + \frac{\pi}{2}, k\pi + \frac{3\pi}{2}]$$

$$\text{جاء) } y \leq \sqrt{1 - k \sin^2 x} \rightarrow 1 - k \sin^2 x \geq 0$$

$$\rightarrow k \sin^2 x \leq 1 \rightarrow \sin^2 x \leq \frac{1}{k} \rightarrow -\frac{1}{\sqrt{k}} \leq \sin x \leq \frac{1}{\sqrt{k}}$$

$$\text{Df} \leq [k\pi + \frac{\pi}{4}, k\pi + \frac{3\pi}{4}]$$

الف) $y = \sqrt{1 - \log_{\frac{1}{x}} x-1} \rightarrow x-1 > 0 \Rightarrow x > 1$ 9

$\frac{1}{x} \rightarrow 1 - \log_{\frac{1}{x}} x-1 > 0$

$\log_{\frac{1}{x}} x-1 < 1 \rightarrow x-1 \leq \frac{1}{x} \rightarrow x \leq \frac{x}{x-1}$

$Df \subseteq (1, \frac{x}{x-1}]$

ب) $y = \frac{\sqrt{x^2 - x}}{1 - \log_{\frac{1}{x}} x^2 - x} \rightarrow \frac{0}{+ \infty - \infty +}$ 12

$\log_{\frac{1}{x}} x^2 - x \neq 1 \rightarrow x^2 - x \neq \frac{1}{x} \Rightarrow x^2 - x - \frac{1}{x} \neq 0$

$\frac{-1}{+ \infty - \infty +}$ 13

$(x-1)(x+1) \neq 0$

$Df \subseteq (-\infty, 0] \cup (1, +\infty) - \{-1, 1\}$

الف) $y = \sqrt{\frac{x-x^2}{x}}$ 14

$\frac{x-x^2}{x} > 0 \rightarrow x-x^2 > 0 \rightarrow x(1-x) > 0 \rightarrow 0 < x < 1$

$(x-1)(x-0) \leq 0 \rightarrow \frac{1}{+ \infty - \infty +} \rightarrow Df \subseteq [1, 1]$

$$\therefore \left(\frac{\mu_{x+Q}}{\mu_{x+E}} \right)! \rightarrow \frac{\mu_{x+Q}}{\mu_{x+E}} \quad \text{SK}$$

$$\rightarrow x_s \frac{Q - \mu_K}{\mu_K - \mu} \rightarrow \text{Dfs} \left\{ x / x_s \frac{Q - \mu_K}{\mu_K - \mu}, K \in \mu \right\}$$