

$$\text{الف) } y, \sqrt{1-x} \Rightarrow \textcircled{1} 1-x \geq 0 \Rightarrow x \leq 1$$

$$(r) \quad r - \sqrt{r-n} \geq 0 \rightarrow (\sqrt{r-n})^2 \leq r \rightarrow r-n \leq r \rightarrow n \geq -1$$

$$b) \sqrt[n]{n - \sqrt{n-2}} =$$

$$\textcircled{1} \quad x-2 \geq 0 \Rightarrow x \geq 2$$

⑤ $\sqrt{x-2} \geq 0, \sqrt{x-2} \leq \sqrt{11-2} \rightarrow x-2 \leq 9 \quad x \leq 11$

$$(b) y_2 \sqrt{1-x^2}$$

$$K - \gamma n^T \geq 0 \rightarrow \gamma n^T \leq K \rightarrow \gamma \leq \frac{K}{n^T} = \frac{1}{\rho_f^T} \in [-\sqrt{\gamma}, \sqrt{\gamma}]$$

ب) $y_2 \sqrt{3|x|-9}$

$$\Rightarrow |x| - 9 \geq 0 \Rightarrow |x| \geq 9 \quad \left. \begin{array}{l} x \geq 9 \\ x \leq -9 \end{array} \right\} \text{PF} \quad \{(-\infty, -9] \cup [9, +\infty)\}$$

$$\text{اف} \left(\frac{|n|+1}{|n|-3} \right)^2$$

$$\Rightarrow |n| - r \neq 0 \Rightarrow |n| \neq r \quad \text{für } r = \pm 1 \Rightarrow \mathcal{P}_f = \mathbb{R} - \{\pm 1\}$$

$$= \frac{1}{2} \left(\frac{1}{\sqrt{n+1}} + \frac{1}{\sqrt{n-1}} \right)$$

① $\rightarrow n \geq 0$ and $\{P_f([0, +\infty)) - \{9\}\}$
 ② $\sqrt{n} - 3 \neq 0 \Rightarrow \sqrt{n} \neq 3 \Rightarrow n \neq 9$

ا) $\sqrt{3-121}$

$$\textcircled{1} \rightarrow \{ -|n| \geq 0 \Rightarrow |n| \leq r \Rightarrow -r \leq n \leq r \} \rho_f, [-r, r]$$

• $(2) |n| + 2 \rightarrow |n| + 2 \neq 0 \quad |n| \neq -2$
[مقدار مطلق صفر نیست و منفی!]

$$\textcircled{1} \sqrt{x-25}$$

$$\textcircled{1} \rightarrow x - n^r \geq 0 \rightarrow n^r \leq x \Rightarrow n \leq r \left. \vphantom{\begin{matrix} x - n^r \geq 0 \\ n^r \leq x \end{matrix}} \right\} D_{f,0}[-r, r] = \left\{ \pm 1 \right\}$$

(ب) $|x| - 1$

5) $|n| - 9 \neq 0$ $|n| \neq 1 \Rightarrow n \neq \pm 1$

$$y_2 \frac{n+1}{\sqrt{n+1}}$$

$$n + |n| > 0, |n| \rightarrow \infty \Rightarrow P_f = [R^+_{-}(\sigma, +\sigma)]$$

ب) $y = \frac{1}{\sqrt{x \ln x}}$

$$\Rightarrow n/n > 9 \Rightarrow Df: \mathbb{R}^+ = (0, +\infty)$$

الف) $y = \sqrt{2-x} \Rightarrow 2-x \geq 0, [x] \leq 2 \Rightarrow x \leq 2 \Rightarrow D_f = (-\infty, 2]$

Ⓟ ✓

ب) $y = \frac{1}{\sqrt{2-x}} \Rightarrow 2-x > 0, [x] < 2 \Rightarrow x < 2 \Rightarrow D_f = (-\infty, 2)$

الف) $y = \frac{1}{x[x]} \Rightarrow x[x] \neq 0 \Rightarrow x \neq 0, [x] \neq 0 \Rightarrow 0 < x < 1 \Rightarrow D_f = (-\infty, 0) \cup [1, +\infty)$

Ⓟ ✓

ب) $y = \frac{1}{\sqrt{-x[x]}} \Rightarrow -x[x] > 0 \Rightarrow x[x] < 0 \Rightarrow D_f = \emptyset$

الف) $y = \sqrt{[x-\frac{1}{x}] + [x+\frac{1}{x}]}$

Ⓟ ✓

ب) $y = \sqrt{[x-\frac{1}{x}] + [-x+\frac{1}{x}]} \Rightarrow D_f = x - \frac{1}{x} \in \mathbb{Z} \Rightarrow x \in \mathbb{Z}, \frac{1}{x} \in \mathbb{Z} \Rightarrow x = \pm 1$

الف) $y = \frac{1}{\sqrt{\sin^2 x - 1}} \Rightarrow \sin^2 x - 1 \neq 0 \Rightarrow \sin^2 x \neq 1 \Rightarrow \sin x \neq \pm 1 \Rightarrow x \neq k\pi + \frac{\pi}{2}$



$\Rightarrow D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$

Ⓟ

$\tan x + 1 \neq 0 \Rightarrow \tan x \neq -1$

$\Rightarrow x \neq \{k\pi + \frac{3\pi}{4}\}, \{k\pi - \frac{\pi}{4}\}$

$D_f = \mathbb{R} - \{k\pi - \frac{\pi}{4}, k\pi + \frac{3\pi}{4}\}$

ب) $y = \frac{\cot x + 1}{\tan x + 1} \Rightarrow \cot x \neq -1 \Rightarrow x \neq k\pi + \frac{3\pi}{4}$

الف) $y = \sqrt{1 - \cos x} \Rightarrow 1 - \cos x \geq 0 \Rightarrow \cos x \leq 1 \Rightarrow D_f = [2k\pi + \pi, 2k\pi + 2\pi]$

$D_f = [2k\pi + \pi, 2k\pi + 2\pi]$



Ⓟ

ب) $y = \sqrt{1 - \cos x} = 1 - \cos x \Rightarrow 1 - \cos x \geq 0 \Rightarrow \cos x \leq 1 \Rightarrow D_f = [2k\pi + \pi, 2k\pi + 2\pi]$



$D_f = [2k\pi + \pi, 2k\pi + 2\pi]$