

پرفیای جابری / پاسنامه تالیف ۳ / یازدهم دفتر A

$$\text{الف) } \frac{x+3}{2x^3+3x^2-1x+3} = \frac{x+3}{(x+1)(2x-1)(x+3)}$$

$$D_f = R_f = \left\{1, \frac{1}{2}, -\frac{3}{2}\right\}$$

$$\text{ب) } \frac{x+3}{(x+1)(x+3)(2x+1)} \quad D_f = R_f = \left\{-\frac{1}{2}, \frac{3}{2}, -\frac{1}{2}\right\}$$

$$\text{الف) } \frac{x+3}{(x-1)(x^2+x+1)-2x(x-1)} = \frac{x+3}{(x-1)(x^2-x+1)}$$

$$D_f = R_f = \{1\}$$

$$\text{ب) } \sqrt{\frac{x+3}{(x-1)(x^2-x+1)}} \rightarrow \frac{x+3}{(x-1)(x^2-x+1)}$$

$$D_f = (-\infty, -3] \cup (1, +\infty)$$

-3	-1
+	-
+	+

$$\begin{array}{c} 2 \\ x^2-5x-11-2x+5 \end{array} \quad \begin{array}{c} 1 \\ x^2+3x \end{array} \quad \begin{array}{c} 3 \\ x^2-7x+10 \end{array}$$

$$\frac{x^2-5x-11-2x+5}{x(x+3)} = \frac{x^2-7x+10}{(x-5)(x-2)}$$

$$D_f = R_f = \{-3, 0, 2, 5\}$$

الف) $[-x] > 2 \Rightarrow 2 < -x \Rightarrow x < -2$ $\mathbb{R}$

$$D_f = (-\infty, -2]$$

ب) $\frac{5x^2 + 4}{([x] - 3)([x] + 1)}$

$$[x] = 3 \Rightarrow 3 < x < 4$$

$$[x] = -1 \Rightarrow -1 < x < 0$$

$$D_f = \mathbb{R} - [-1, 0) \cup [3, 4)$$

الف) $[x - \frac{1}{3}] + [x + \frac{2}{3}] \geq 0$

$$2[x + \frac{2}{3}] \geq 1 \Rightarrow [x + \frac{2}{3}] \geq \frac{1}{2}$$

$$[x + \frac{2}{3}] \geq 1$$

$$1 \leq x + \frac{2}{3} \Rightarrow \frac{1}{3} \leq x$$

$$D_f = [\frac{1}{3}, +\infty)$$

ب) $[x - \frac{1}{3}] + [\frac{1}{3} - x] \geq 0$

$$x - \frac{1}{3} \in \mathbb{Z} \Rightarrow D_f = \{x \mid x = k + \frac{1}{3}, k \in \mathbb{Z}\}$$

الف) $\frac{\cot x + 1}{\tan x + 1} \Rightarrow \tan x \neq -1, \cos x \neq 0$

$$D_f = \mathbb{R} - \left\{k\pi + \frac{3\pi}{4}, k\pi + \frac{\pi}{2}\right\}$$

$$ب) (1 - 2 \sin x)(1 + 2 \sin x) \geq 0$$

$$\sin x \rightarrow \frac{-1}{2} \quad \frac{1}{2}$$

$$D_f = \left[k\pi - \frac{\pi}{4}, k\pi + \frac{\pi}{4} \right]$$

$$الف) |\sin x| \geq \frac{1}{2} \rightarrow D_f = \left[2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6} \right] \cup$$

$$ب) \cos x \leq \frac{1}{2} \rightarrow D_f = \mathbb{R} - \left(2k\pi - \frac{\pi}{3}, 2k\pi + \frac{\pi}{3} \right)$$

$$الف) -1 \leq x^3 + 3x + 1 \leq 1$$

A

$$(x+1)(x+1) \geq 0 \quad \rightarrow \quad x(x+3) \leq 0$$

$$\frac{-1}{1} \quad \frac{-1}{1}$$

$$\frac{-3}{1} \quad \frac{0}{1}$$

$$D_f = [-3, -1] \cup [-1, 0]$$

$$ب) \sqrt{\omega - 2x} \leq 1 \rightarrow \omega - 2x \leq 1$$

$$2\sqrt{x} \leq 2\omega$$

$$\text{الف) } 1 - \log_{\mu} x > 0 \Rightarrow \log_{\mu} x < 1 \quad 9$$

$$x > 0, \quad x < \mu \Rightarrow 0 < x < \mu$$

$$D_f = (0, \mu)$$

$$\text{ب) } 1 - \log_{\frac{1}{\mu}} x > 0 \Rightarrow \log_{\frac{1}{\mu}} x < 1$$

$$x > 0, \quad x < \frac{1}{\mu}$$

$$D_f = (0, \frac{1}{\mu})$$

$$\text{الف) } \mu^{fx-x^r} - 1 > 0 \quad \mu^{\mu} (\mu^{fx-x^r-\mu} - 1) > 0 \quad 6$$

$$-x^r + fx - \mu = 0 \Rightarrow x = 1, \mu$$

$$D_f = [1, \mu]$$

$$\begin{array}{cc} 1 & \mu \\ - & + \\ - & + \end{array}$$

$$\text{ب) } \frac{\mu x + \omega}{\mu x + r} \in W \Rightarrow x = -\frac{rW - \omega}{\mu W - \mu} = \frac{\omega - rW}{\mu W - \mu}$$

$$D_f = \left\{ x \mid x = \frac{\omega - rW}{\mu W - \mu}, \quad W \in W \right\}$$