

$y = \frac{x+3}{x-2}$ الف

$$2x^2 + 2x^2 - 1x + 3 = 0$$

بـ (x-1) تقسیم می‌کنیم.

$$\textcircled{1} \quad r_x^T + \omega x - r = \frac{1}{T} (r_x^T + \log x - q)$$

$$\frac{1}{r}(rx+y)(rx-1) = (x+r)(rx-1)$$

$$y = \frac{x + r}{(x-1)(x+r)(rx-1)}$$

$$\textcircled{v} \quad y = \frac{x + x^k}{-1 \leftarrow (k+1)(x+x^k) \times (x+1)}$$

$$y = x + 2$$

$$x^2 - (x^2 + 2x - 1) = 0$$

$$\begin{array}{r} 2x^n - 7x^n + (n-1)x - 1 \\ -x^n + x^n \qquad \qquad \qquad 2x^n - x + 1 \\ \hline -x^n + 7x^n - 1 \\ +x^n \qquad \qquad \qquad \hline \qquad \qquad \qquad x - 1 \\ \qquad \qquad \qquad -x + 1 \\ \qquad \qquad \qquad \hline \qquad \qquad \qquad 0 \end{array}$$

$$x^r - x + 1 \quad \Delta = b^r - \epsilon_{ac} \quad (F)$$

$$y = \frac{n+r}{(n-1)(n \pm n+1)}$$

$$\therefore y = \sqrt{\frac{x+r}{x^2 - 2x + 1}} = \sqrt{\frac{x+r}{(x-1)^2}} \rightarrow -r$$

$$\frac{-2}{1 + \phi - \sqrt{5} + \dots}$$

$$D_f = (-\infty, -2] \cup (1, +\infty)$$

$$g = \frac{r}{x^r - \omega|x-1| - \Gamma n + \omega}$$

$$(x-1)^r = \omega |x-1| + r$$

$$(|x-1| - 1) \underbrace{(|x-1| - \varepsilon)}_{\varepsilon} = 0$$

$$|x-1| = 1 \quad \begin{cases} r \\ 0 \end{cases} \quad |x-1|$$

$$|x-1| = 5 \rightarrow \begin{cases} 5 \\ -5 \end{cases}$$

$$P_f = IR - \{-r, 0, r, \omega\}$$

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

$$\therefore I = \frac{\omega n^2 + 4}{[n]^2 + 4[n] - 7}$$

$$[u] \neq v \Rightarrow u \notin [v, s)$$

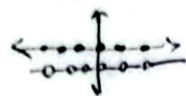
$$[n]_{+,-1} \Rightarrow n \notin [-1, 0)$$

$$\rho_f = (-\infty, -1) \cup [0, r) \cup [f, +\infty)$$

الف) $y = \sqrt{\left[x - \frac{1}{x}\right] + \left[x + \frac{x}{x}\right]} = \sqrt{\left[x + \frac{x}{x} - 1\right] + \left[x + \frac{x}{x}\right]} = \sqrt{2\left[x + \frac{x}{x}\right] - 1}$ (4)

$2\left[x + \frac{x}{x}\right] > 1 \Rightarrow \left[x + \frac{x}{x}\right] > \frac{1}{2} \Rightarrow x + \frac{x}{x} > \frac{1}{2} \Rightarrow x > \frac{1}{x}$

ب) $y = \sqrt{\left[x - \frac{1}{x}\right] + \left[\frac{1}{x} - x\right]} = \sqrt{[a] + [-a]}$



با توجه به شکل بالا
مفروضه در نقطه بزرگیم
اگر صحیح

$D_f = \left[\frac{1}{x} + \infty\right)$

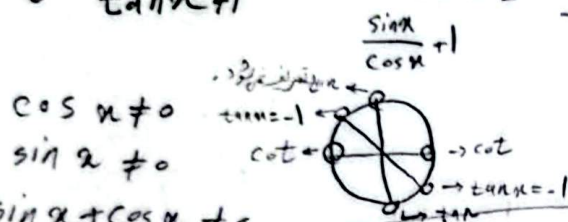
$a \in \mathbb{Z} \Rightarrow x - \frac{1}{x} \in \mathbb{Z}$

$\Rightarrow x \in \mathbb{Z} + \frac{1}{x}$

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

الف) $y = \frac{\cot x + 1}{\tan x + 1} = \frac{\frac{\cos x}{\sin x} + 1}{\frac{\sin x}{\cos x} + 1} = \frac{\cos x + \sin x}{\sin x + \cos x}$

ب) $y = \sqrt{1 - \sin^2 x}$ (1)



$1 - \sin^2 x \geq 0$

$\sin^2 x \leq 1$

$\sin^2 x \leq \frac{1}{x}$

$-\frac{1}{x} \leq \sin x \leq \frac{1}{x}$

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

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

الف) $y = \sqrt{2\sin x - 1}$

$2\sin x - 1 \geq 0$
 $\sin x \geq \frac{1}{2}$

ب) $y = \sqrt{1 - \cos x}$

$1 - \cos x \geq 0 \Rightarrow \cos x \leq 1$



$D_f = \left[2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}\right]$



$D_f = \left[2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}\right]$

الف) $y = \arcsin(\sin x)$

$-1 \leq \sin x \leq 1$
 $\frac{1}{x} \leq \sin x \leq \frac{1}{x}$
 $\frac{1}{x} \leq \left(x + \frac{x}{x}\right) \leq \frac{1}{x}$
 $\frac{1}{x} \leq \left(x + \frac{x}{x}\right) \leq \frac{1}{x}$
 $-x \leq x \leq -x$

ب) $\cos y = \sqrt{2 - 2x}$ (1)

$-1 \leq \sqrt{2 - 2x} \leq 1$

$1 - 2x \leq 1 \Rightarrow x \geq 0$

$\Rightarrow \sqrt{2 - 2x} \leq 1 \Rightarrow 1 \leq x \leq \frac{1}{x}$

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

$D_f = (1) \cap (2) = \left[2, \frac{1}{x}\right]$

الف) $y = \log_r \left(\frac{1 - \log x}{x}\right) > 0 \Rightarrow 1 - \log x > 0 \Rightarrow \log x < 1 \Rightarrow x < 10$

ب) $\log \left(\frac{1 - \log x}{x}\right) > 0$
 $\log x > 0 \Rightarrow x > 1$
 $\log x > 0 \Rightarrow x > 1$
 $\log x > 0 \Rightarrow x > 1$

$\Rightarrow (1) \cap (2) = D_f = (\log 10)$

$\log \left(\frac{1 - \log x}{x}\right) > 0 \Rightarrow \log x < 1 \Rightarrow x > \frac{1}{x}$

$D_f = (1) \cap (2) = \left(\frac{1}{x} + \infty\right)$

الف) $y = \sqrt{r^{x-x^r} - 1} \Rightarrow r^{x-x^r} > 1$

$\Rightarrow r^{x-x^r} > 1 \Rightarrow x^r - rx + r < 0 \Rightarrow (x-1)(x-r) < 0$

$D_f = [1, r]$ $\Leftarrow \frac{1}{+ \phi - 1 +}$

ب) $y = \left(\frac{rx + \omega}{rx + r} \right)^{\frac{1}{r-1}}$ $\Rightarrow x = \frac{r\omega - \omega}{rx - r}$

Subject:

DATE

$D_f = \left\{ x \mid x = \frac{\omega - rk}{rk - r}, r < e\omega \right\}$