

۱۹,۵۵ آفرین دلی علم سب تر نویسی میهمان

وقت ہے سفر پور
نیک بزاری تو ہم
سیدہ سفر میں
۸-۱

$$\begin{array}{c|cccc} & -x & -1 & & \\ \hline -x & 1 & 1 & & \\ x & & 1 & & \\ -x & & & 1 & \\ x & & & & 1 \end{array} \quad D = \{R, -y, -x, -1, \frac{1}{x}\}$$

$$\begin{array}{r}
 x^2 + 2x + 1 \\
 \hline
 x^2 + 2x + 1 \\
 \hline
 0
 \end{array}$$

$$D = IR - \frac{1}{r} = -1$$

$$n = \frac{1}{2} \rightarrow n = -\frac{9}{4} \text{ s.t.}$$

$$\begin{array}{r} x^4 + x^3 \\ - (x^4 + 2x^3 + x^2 + x - 1) \\ \hline x^2 - x + 1 \\ - (x^2 + x - 1) \\ \hline -2x + 2 \\ - (-2x + 2) \\ \hline 0 \end{array} \quad \begin{array}{r} x-1 \\ \overline{) x^2 - x + 1} \\ \underline{x^2 - x + 1} \\ 0 \end{array}$$

$$\rho \in \mathcal{P}(X) \mid \rho = \frac{\omega - \epsilon_K}{\gamma_K - \epsilon}, K \in W$$

$$u) \left(\frac{v\lambda + \omega}{v\lambda + f} \right)!$$

$\frac{W}{2} \times \frac{W}{2} + W \times \frac{W}{2} = \frac{W^2}{4} + \frac{W^2}{2} = \frac{3W^2}{4}$

$$J_y = \sqrt{\frac{n(n+1)}{n^2 - 2n^2 + n - 1}}$$

$$x^3 - 4x^2 + 4x - 1 \quad | \quad x-1 \quad \begin{array}{l} \text{---} \\ x^3 - x^2 + 1 \\ \hline -3x^2 + 4x - 1 \end{array}$$

$$D = (-\infty, \frac{1}{2}] \cup (1, +\infty)$$

$$g = \frac{x^2 - \omega|x-1| - rx + \omega}{x^2 + \omega x - \omega - rx + \omega}$$

$$x > 1 \rightarrow x^2 - \omega(x-1) - rx + \omega = x^2 - \omega x + \omega - rx + \omega = x^2 - \omega x + 1 - rx + \omega$$

$$x < 1 \rightarrow x^2 + \omega x - \omega - rx + \omega = x^2 + \omega x - \omega - rx + \omega = x^2 + \omega x - rx$$

$$D = \{x \in \mathbb{R} \mid x \neq 0, x \neq \omega\}$$

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الف ← سوال ۳۰ نوسه
 ب ← سوال ۳۱ نوسه
 ج ← سوال ۳۲ نوسه

4

ا) $y = \sqrt{[x]-2}$ $[-x] = 2$
 $[x]-2 \geq 0$
 $[x] \geq 2$

$-x \rightarrow [2, +\infty) \rightarrow x \in (-\infty, -2]$

ب) $y = \frac{\omega x^2 + 4}{[x]^2 - 2[x] - 2}$ $[x] - 2 \neq 0$ $[x] = t$
 $t^2 - 2t - 2 \neq 0$
 $(t-3)(t+1) \neq 0$

$t \neq 3$ $t \neq -1$
 $[x] \neq 3$ $[x] \neq -1$
 $(3, +\infty)$ ~~$(-\infty, -1)$~~
 $(0, 0)$

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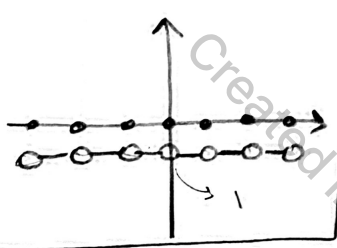
ا) $y = \sqrt{[x - \frac{1}{3}] + x[\frac{2}{3}]}$ $\rightarrow [x + \frac{2}{3} - 1] + [x + \frac{2}{3}]$

~~$x + \frac{2}{3} \geq 1$~~ $x \geq \frac{1}{3}$
 $2[x + \frac{2}{3}] - 1 \geq 0 \rightarrow [x + \frac{2}{3}] \geq \frac{1}{2}$
 $D = [\frac{1}{3}, +\infty)$

اولين عدد صحيح

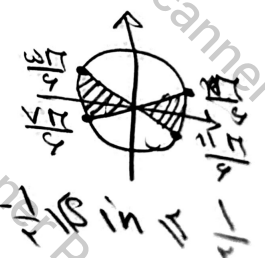
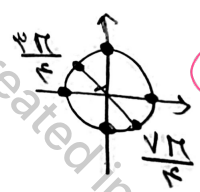
ب) $y = \sqrt{[x - \frac{1}{3}] + [\frac{1}{3} - x]}$ $\rightarrow [a] + [-a]$ $a \in \mathbb{Z} = 0$
 $a \notin \mathbb{Z} = -1$

$D = \{x \mid x = k + \frac{1}{3}, k \in \mathbb{Z}\}$ $a \in \mathbb{Z} \rightarrow x - \frac{1}{3} \in \mathbb{Z}$
 $x \in \mathbb{Z} + \frac{1}{3}$



ا) $y = \frac{\cot a}{\tan a + 1}$ $\frac{k\pi}{\pi}$
 $\tan a = -1$

$D = \mathbb{R} - \{ \frac{k\pi}{2}, k\pi \neq \frac{\pi}{4} \}$



ب) $y = \sqrt{1 - 4 \sin^2 x}$ $1 - 4 \sin^2 x \geq 0$ $4 \sin^2 x \leq 1$ $\sin^2 x \leq \frac{1}{4}$
 $x = [k\pi - \frac{\pi}{6}, k\pi + \frac{\pi}{6}]$

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Q1) $y = \sqrt{1-x^2} \rightarrow y \sin^{-1} \rightarrow y \sin^{-1} \rightarrow \sin^{-1} \frac{1}{y}$

$D = [y \sin^{-1} \frac{1}{y}, y \sin^{-1} \frac{1}{y}]$



Q2) $y = \sqrt{1-x^2} \rightarrow \cos \leq -\frac{1}{y}$



$D = [y \sin^{-1} \frac{1}{y}, y \sin^{-1} \frac{1}{y}]$

$D = [R - (y \sin^{-1} \frac{1}{y}, y \sin^{-1} \frac{1}{y})]$

Q3) $y = \arcsin(x^2 + 2x + 1)$

$-1 \leq x^2 + 2x + 1 \leq 1$

$x^2 + 2x + 1 \leq 1 \rightarrow x^2 + 2x \leq 0$

$x^2 + 2x + 1 \geq -1 \rightarrow x^2 + 2x + 2 \geq 0$

$(x+1)^2 \geq 0$

$x^2 + 2x + 1 = x^2$

$x = \frac{1}{2} \rightarrow \frac{1}{2} - \frac{1}{2} = 0$

$\frac{1}{2} - \frac{1}{2} = 0$



$D = [-1, 1] \cup [1, 0]$

Q4) $\cos y = \sqrt{a-2x} \rightarrow a-2x \geq 0 \rightarrow x \leq \frac{a}{2}$

$-1 \leq \sqrt{a-2x} \leq 1 \rightarrow 0 \leq a-2x \leq 1 \rightarrow -a \leq -2x \leq -1$

$\frac{a}{2} \leq x \leq \frac{a}{2}$



$D = [\frac{a}{2}, \frac{a}{2}]$

Q5) $\log(1-\log x) > 0 \rightarrow x > 0 \rightarrow \log x > 0$

$0 < x < 1$

$D = (0, 1)$

$1-\log x > 0 \rightarrow \log x < 1 \rightarrow x < 10$

Q6) $\log(1-\log \frac{1}{x}) > 0$

$1-\log \frac{1}{x} > 0 \rightarrow \log \frac{1}{x} < 1 \rightarrow x > \frac{1}{10}$

$D = (\frac{1}{10}, 10)$

۴- الف) $y = \frac{\cot x + 1}{\tan x + 1}$

$x \neq k\pi + \frac{\pi}{2}$

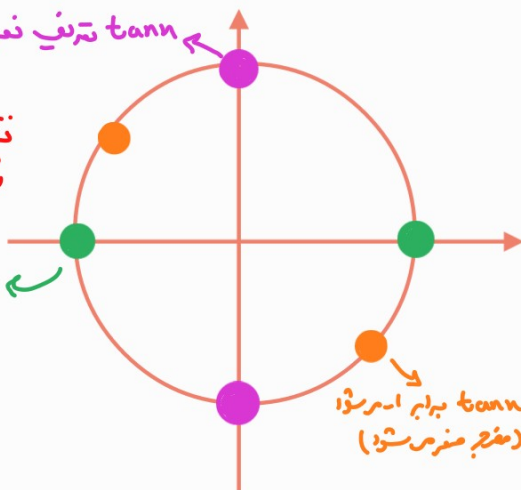
$x \neq k\pi + \frac{\pi}{4} \cup x \neq k\pi$

$\rightarrow x \neq \frac{k\pi}{2}$

نقاط نامعلوم را در دایره
مستوی مشخص میکنیم.

$\cot x$ تعریف نمیشود

$\tan x$ تعریف نمیشود



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