

نام و نام خانوادگی پاس‌نامه تشریحی تکلیف شماره ۳ کلاس نام پدر A

حدود مجموع ضرایب برابر صفرند به ا- x یعنی بدین است

$$\text{ب) } y = \frac{x+1}{x^2+x-1} \rightarrow x^2+x-1 \neq 0 \rightarrow (x-1)(x+2) \neq 0 \rightarrow (x-1)(x+2)(x+1) \neq 0$$

$$\Rightarrow |R - \{-^w, \frac{1}{p}, 1\}| = D_y$$

حدن مجموع صرایب فرد و زوج برابر است بر $x + 2$ یعنی نذیر است

$$\therefore y = \frac{x^4 + 1}{x^4 + 9x^2 + 10x + 1} \rightarrow x^4 + 9x^2 + 10x + 1 \neq 0 \rightarrow (x+1)(x^2 + 8x + 1) \neq 0 \rightarrow (x+1)(x+1)(x+1) \neq 0$$

$$\Rightarrow D_y = \mathbb{R} - \left\{ -1, -3, -\frac{1}{4} \right\}$$

چون مجموع ضرایب مندرج است بر $x-1$ یعنی $2^{n-1}-1$

حالا جواب ندارد و فقط $x=1$ است

است جواب ندارد و فقط $x=1$ است. مخرج است.

$$\Rightarrow Dy = IR - |1\rangle$$

$$c) y = \sqrt{\frac{x+\mu}{x^\mu - \mu x^\mu + \mu x - 1}} \rightarrow \frac{x+\mu}{x^\mu - \mu x^\mu + \mu x - 1} \geq 0 \rightarrow \frac{x+\mu}{(x-1)(x^\mu - \mu x + 1)} \geq 0 \rightarrow \frac{-1}{+ \phi - \psi} +$$

$$\Rightarrow D_y = (-\infty, -1] \cup (1, +\infty)$$

$$x^p - 1_{x \neq 0} = (x-1)^p + f \text{ f.b.c.}$$

$$y = \frac{p}{x^p - a|x-1| - px + a} \rightarrow x^p - a|x-1| - px + a \neq 0 \rightarrow (x-1)^p - a|x-1| + 1 \neq 0 \rightarrow t^p - at + 1 \neq 0$$

$$\begin{aligned} & x^2 - a|x-1| - yx + a \\ \rightarrow (+1)(+1) \neq 0 & \Rightarrow t \neq 1 \quad |t \neq 1 \Rightarrow \begin{cases} |x-1|=1 \rightarrow x-1=\pm 1 \Rightarrow x=2, x=0 \\ |x-1|=t \rightarrow x-1=\pm t \Rightarrow x=a, x=-a \end{cases} \end{aligned}$$

$$\Rightarrow D_y = \mathbb{R} - \{-3, 0, 2, \omega\}$$

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

$$\hookrightarrow y = \frac{\Delta x^2 + 7}{[x]^2 \cdot [x] - 4} \rightarrow [x]^2 \cdot [x] - 4 \neq 0 \rightarrow ([x] - 3)([x] + 1) \neq 0 \Rightarrow [x] \neq 3 \text{ \& } [x] \neq -1$$

$$\Rightarrow \begin{cases} [x] = 1 \Rightarrow 1 \leq x < 2 \\ [x] = -1 \Rightarrow -1 \leq x < 0 \end{cases} \Rightarrow D_y = \mathbb{R} - ([-1, 0) \cup (1, 2))$$

$$\text{الف) } y = \sqrt{\left[x - \frac{1}{p}\right] + \left[x + \frac{1}{p}\right]} \quad \begin{array}{l} \left[x + \frac{1}{p}\right] = \left[x + 1 - \frac{1}{p}\right] \Rightarrow \left[x - \frac{1}{p}\right] + 1 \\ \rightarrow \left[x - \frac{1}{p}\right] + \left[x - \frac{1}{p}\right] + 1 \geq 0 \rightarrow 2\left[x - \frac{1}{p}\right] \geq -1 \Rightarrow \left[x - \frac{1}{p}\right] \geq -\frac{1}{2} \end{array}$$

$x - \frac{1}{x} \geq 0 \Rightarrow x - \frac{1}{x} \geq 0 \Rightarrow x \geq \frac{1}{x} \Rightarrow D_y = \left[\frac{1}{x}, +\infty \right)$
 ا) $y = \sqrt{x - \frac{1}{x}} + \frac{1}{x} - x$ $\xrightarrow{[x - \frac{1}{x}] \rightarrow [u]}$ $[u] + [-u] \geq 0$ $\xrightarrow{\text{مع با هم}}$ $\begin{cases} [u] + [-u] = 0: \text{اگر } u \in \mathbb{R} \\ [u] + [-u] = 1: \text{اگر } u \notin \mathbb{R} \end{cases} \Rightarrow u \in \mathbb{R}$

$$\Rightarrow x - \frac{1}{x} = K \quad (K \in \mathbb{Z}) \Rightarrow x = K + \frac{1}{x} \Rightarrow D_y = \left\{ K + \frac{1}{x} \mid K \in \mathbb{Z} \right\}$$

$$\text{ا) } y = \frac{\cot x + 1}{\tan x + 1} \rightarrow \left\{ \begin{array}{l} \sin x \neq 0 \\ \cos x \neq 0 \\ \tan x \neq -1 \Rightarrow x \neq k\pi - \frac{\pi}{4} \end{array} \right\} \Rightarrow D_y = \mathbb{R} - \left\{ \frac{k\pi}{4}, k\pi - \frac{\pi}{4} \right\} (k \in \mathbb{Z})$$

$$\text{ب) } y = \sqrt{1 - f \sin^2 x} \Rightarrow 1 - f \sin^2 x \geq 0 \rightarrow f \sin^2 x \leq 1 \rightarrow \sin^2 x \leq \frac{1}{f} \rightarrow |\sin x| \leq \frac{1}{\sqrt{f}} \Rightarrow -\frac{1}{\sqrt{f}} \leq \sin x \leq \frac{1}{\sqrt{f}} \Rightarrow D_y = \left[k\pi - \frac{\pi}{2}, k\pi + \frac{\pi}{2} \right]$$

$$\text{ا) } y = \sqrt{p \sin x - 1} \rightarrow p \sin x - 1 \geq 0 \rightarrow p \sin x \geq 1 \rightarrow \sin x \geq \frac{1}{p} \Rightarrow D_y = \left[2k\pi + \frac{\pi}{6}, 2k\pi + \frac{5\pi}{6} \right]$$

$$\text{ب) } y = \sqrt{1 - p \cos x} \rightarrow 1 - p \cos x \geq 0 \rightarrow p \cos x \leq 1 \rightarrow \cos x \leq \frac{1}{p} \Rightarrow D_y = \left[2k\pi + \frac{\pi}{3}, 2k\pi + \frac{5\pi}{3} \right]$$

$$\text{ا) } y = \arcsin(x^2 + 3x + 1) \rightarrow -1 \leq x^2 + 3x + 1 \leq 1 \rightarrow \left\{ \begin{array}{l} x^2 + 3x + 1 \geq -1 \rightarrow (x+1)(x+2) \geq 0 \\ x^2 + 3x + 1 \leq 1 \rightarrow (x+3)x \leq 0 \end{array} \right. \Rightarrow \frac{-2}{-1-1} \leq x \leq \frac{-3}{-1-3} \Rightarrow \frac{1}{2} \leq x \leq 1$$

$$D_y = \left[\frac{1}{2}, 1 \right] \cup [-1, 0]$$

$$\text{ب) } \cos y = \sqrt{a - px} \rightarrow \left\{ \begin{array}{l} a - px \geq 0 \rightarrow x \leq \frac{a}{p} \quad (1) \\ -1 \leq \sqrt{a - px} \leq 1 \rightarrow 0 \leq \sqrt{a - px} \leq 1 \rightarrow 0 \leq a - px \leq 1 \rightarrow \left\{ \begin{array}{l} a - px \geq 0 \Rightarrow x \leq \frac{a}{p} \\ a - px \leq 1 \Rightarrow x \geq \frac{a-1}{p} \end{array} \right. \quad (2) \end{array} \right.$$

$$\text{①} \cap \text{②} \rightarrow \frac{a-1}{p} \leq x \leq \frac{a}{p} \Rightarrow D_y = \left[\frac{a-1}{p}, \frac{a}{p} \right]$$

$$\text{ا) } y = \log_r(1 - \log_p x) \rightarrow \left\{ \begin{array}{l} x > 0 \\ 1 - \log_p x > 0 \rightarrow \log_p x < 1 \rightarrow x < p \end{array} \right\} \Rightarrow 0 < x < p \Rightarrow D_y = (0, p)$$

$$\text{ب) } y = \log_r(1 - \log_{\frac{1}{p}} x) \rightarrow \left\{ \begin{array}{l} x > 0 \\ 1 - \log_{\frac{1}{p}} x > 0 \rightarrow \log_{\frac{1}{p}} x < 1 \rightarrow \frac{1}{p} < x < \infty \end{array} \right\} \Rightarrow \frac{1}{p} < x < \infty \Rightarrow D_y = \left(\frac{1}{p}, \infty \right)$$

$$\text{ا) } y = \sqrt{p^2 x - x^2} - 1 \rightarrow p^2 x - x^2 - 1 \geq 0 \rightarrow p^2 x - x^2 \geq 1 \rightarrow p^2 x - x^2 \geq p^2 \Rightarrow x - x^2 \geq p \rightarrow$$

$$x^2 - px + p \leq 0 \rightarrow (x-1)(x-p) \leq 0 \Rightarrow \frac{1}{p} \leq x \leq p \Rightarrow D_y = \left[\frac{1}{p}, p \right]$$

$$\text{ب) } y = \left(\frac{px + a}{px + b} \right)! \rightarrow \frac{px + a}{px + b} = k (k \in \mathbb{N}) \rightarrow px + a = kpx + kb \rightarrow a - kb = (k-1)p \Rightarrow$$

$$\Rightarrow x = \frac{a - kb}{k-1} (k \in \mathbb{N}) \Rightarrow D_y = \left\{ \frac{a - kb}{k-1} \mid k \in \mathbb{N} \right\}$$