



A دس قدر

کلاس دسویں

تلف سہارہ ۲

$$r^n + y^r - rn + ry + k = 0 \quad (1)$$

$$(y+r)^r + r(n-1)^r = 0$$



$$y^r + ry + r + rn^r - rn + r = 0$$

$$k = r + r = 11$$



$$n=1, y=-r \Rightarrow (1, -r) \text{ نقطہ}$$

$$a^r + ra = ra + r \quad (2)$$

$$a^r + a - r = 0 \rightarrow (a+r)(a-1) = 0$$

$$\rightarrow a = -r \times$$

$$(a=1) \rightarrow a > 0$$

$$n=1 \rightarrow n^r + rn = 1 + r = a = f(1)$$

$$|n+1| \geq r \rightarrow n+1 \geq r \rightarrow n \geq 1 \quad (3)$$

$$n+1 \leq -r \rightarrow n \leq -r$$

$$r(-r)^r - b = a - r \rightarrow 11 - b = a - r$$

$$[r^r = a + b]$$



$$y = \sqrt{4n-a} + \sqrt{b-3n} \quad (E)$$

$$4n-a \geq 0 \rightarrow n \geq \frac{a}{4} \rightarrow 2n \geq \frac{a}{2} \rightarrow a=12$$

$$b-3n \geq 0 \rightarrow \frac{b}{3} \geq n \rightarrow \frac{b}{3} \geq 2 \rightarrow b=6$$

$$\frac{b}{a} = \frac{6}{12} = \frac{1}{2}$$

$$\text{الف) } y = \sqrt{\frac{n+1}{|n-3|}} + \sqrt{\frac{4-n}{n^2+n+2}} \quad (A)$$

$$\begin{array}{c} -1 \quad 3 \\ | \quad | \\ - \phi + \phi + \end{array}$$

$$\begin{array}{c} 4 \\ | \\ + \phi - \end{array} \quad (-\infty, 4] \quad (P)$$

$$[-1, 3) \cup (3, +\infty) \quad (D)$$

$$D \cap P \Rightarrow [-1, 3) \cup (3, 4]$$

$$\text{ب) } \sqrt{[n]-2} + \sqrt{2-[n]}$$

$$[n] \geq 2 \quad 2 \geq [n]$$

$$(1) \quad n \geq 2 \quad 2 > n \quad (2)$$

$$(1) \cap (2) \Rightarrow D_f = \emptyset$$



الف) $y = \sqrt{\frac{n^2 - n - 4}{n^2 - 11n + 34}}$ $(n-3)(n+2) = 0$

$$\begin{cases} n = 3 \\ n = -2 \end{cases}$$

④

$$n^2 = t \rightarrow t^2 - 13t + 34 = 0 \rightarrow (t-2)(t-9) = 0$$

$$t = 2$$

$$t = 9$$

$$\begin{aligned} n^2 = 2 &\rightarrow n = \pm\sqrt{2} \\ n^2 = 9 &\rightarrow n = \pm 3 \end{aligned}$$

$$\begin{array}{ccccccc} -\sqrt{2} & & \sqrt{2} & & -3 & & 3 \\ | & & | & & | & & | \\ + & - & + & - & + & - & + \end{array}$$

$$D_f = (-\infty, -3) \cup (2, 3) \cup (3, +\infty)$$

$$ب) y = \sqrt{\frac{n^3 - 12n^2 - 5n + 4}{n^3 + 12n^2 - 5n - 4}} = \sqrt{\frac{(n-1)(n^2 - n - 4)}{(n+1)(n^2 + n - 4)}}$$

$$= \sqrt{\frac{(n-1)(n-3)(n+2)}{(n+1)(n+3)(n-2)}}$$

$$\begin{array}{ccccccc} -3 & & -2 & & -1 & & 1 & & 2 & & 3 \\ | & & | & & | & & | & & | & & | \\ + & - & + & - & + & - & + & - & + & - & + \end{array}$$

$$D_f = (-\infty, -3) \cup [-2, -1) \cup [1, 2) \cup [3, +\infty)$$

$$\begin{array}{r|l} n^3 - 2n^2 - 5n + 4 & n-1 \\ \hline -n^3 + n^2 & n^2 - n - 4 \end{array}$$

$$-n^3 - 5n + 4$$

$$n^2 - n$$

$$-4n + 4$$

$$4n - 4$$

0

$$\begin{array}{r|l} n^3 + 2n^2 - 5n - 4 & n+1 \\ \hline -n^3 - n^2 & n^2 + n - 4 \end{array}$$

$$n^2 - 5n - 4$$

$$-n^2 - n$$

$$-4n - 4$$

$$+4n + 4$$

0

$$\text{الف) } y = \sqrt{[-x] - 2}$$

✓

$$[-x] - 2 \geq 0 \rightarrow [-x] \geq 2$$

$$x \leq -2$$

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

$$\text{ب) } y = \frac{5x^2 + 2}{[x]^2 - 2[x] - 3} \neq 0$$

$$([x] + 1)([x] - 3) \rightarrow \begin{array}{c} -1 \quad 0 \quad 3 \quad 4 \\ + \quad \phi \quad \phi \quad - \quad \phi \quad + \end{array}$$

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



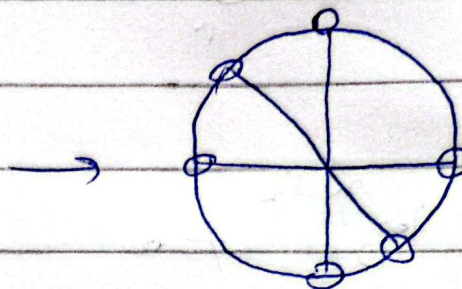
الف) $y = \frac{\cot x + 1}{\tan x + 1}$

①

$$\tan x \neq -1$$

$$\cos x \neq 0$$

$$\sin x \neq 0$$



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

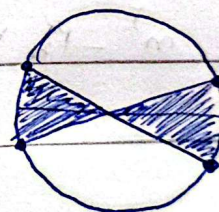
ب) $y = \sqrt{1 - r^2 \sin^2 x}$

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

$$1 \geq r^2 \sin^2 x$$

$$\frac{1}{r} \geq \sin^2 x$$

$$\frac{1}{r} \geq \sin x \geq -\frac{1}{r}$$



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

الف) $y = \sqrt{1 - \log_{\frac{1}{r}}^{n-1}}$

②

$$1 - \log_{\frac{1}{r}}^{n-1} \geq 0 \rightarrow 1 \geq \log_{\frac{1}{r}}^{n-1}$$

$$\frac{1}{r} \leq n-1 \rightarrow \frac{r}{r} \leq n \quad D_f = \left[\frac{r}{r}, +\infty \right)$$

$$f(x) = \frac{\sqrt{x^2 - 1}}{1 - \log_{\frac{1}{x}}(x^2 - 1)} \rightarrow x(x-1) \geq 0$$

$$\begin{array}{c|c|c} & 0 & 1 \\ \hline + & - & + \end{array}$$

$$(-\infty, 0] \cup [1, +\infty) = D_f$$

$$1 - \log_{\frac{1}{x}}(x^2 - 1) \neq 0$$

$$\log_{\frac{1}{x}}(x^2 - 1) \neq 1$$

$$x^2 - 1 \neq x \rightarrow x^2 - 1 - x \neq 0$$

$$\begin{array}{c|c|c} & -1 & 1 \\ \hline + & - & + \end{array}$$

$$(x-1)(x+1) \neq 0$$

$$x \neq -1, 1$$

$$x^2 - 1 > 0 \rightarrow x(x-1) > 0$$

$$\begin{array}{c|c|c} & 0 & 1 \\ \hline + & - & + \end{array}$$

$$D_f = (-\infty, 0) \cup (1, +\infty)$$

$$D_f = (-\infty, -1) \cup (-1, 0) \cup (1, 1) \cup (1, +\infty)$$

$$الف) y = \sqrt{r^{f_{n-n^2}} - \lambda}$$

(10)

$$r^{f_{n-n^2}} \geq r^r$$

$$f_{n-n^2} \geq r$$

$$n^2 - f_n + r \leq 0$$

$$(n-r)(n-1) \leq 0$$

$$\begin{array}{c} + \quad - \quad + \\ \hline \end{array}$$

$$D_f = [1, r]$$

$$ب) y = \left(\frac{r_n + \alpha}{r_n + \varepsilon} \right) !$$

$$\frac{r_n + \alpha}{r_n + \varepsilon} \in \mathbb{N} \rightarrow n = \frac{-r_1 w + \alpha}{r_1 w - r}$$

$$D_f = \{n \mid n = \frac{-r_k + \alpha}{r_k - r}, k \in \mathbb{N}\}$$