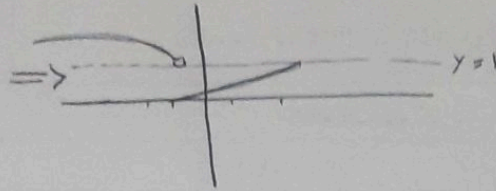


$$y > 0 \Rightarrow y = \frac{n+1}{2}$$

$$y > 1 \Rightarrow \pm \sqrt{-n}$$



* تابع هست

1

$$\frac{n^2(n-2)}{f(n)} > 0 \Rightarrow \frac{-2 \quad -2 \quad 0 \quad 2 \quad \Delta^* \quad 2}{- \quad + \quad - \quad + \quad - \quad +} \Rightarrow D_f = (-2, -2] \cup [0, 2) \cup [2, +\infty)$$

$$f(n) = 0 \Rightarrow n \in \{-2, 2, \infty\}$$

$$f(n-2) = 0 \Rightarrow n \in \{-2, \infty, 2\}$$

2

$$f(n) = \frac{2n^2 - 3n + 2}{n(n-2)(n+2)} \Rightarrow D_f(n) = \mathbb{R} - \{2, 0, -2\} \quad (\text{الف})$$

$$\text{ب.) } \frac{2n^2 - 3n + 2}{n(n-2)(n+2)} > 0 \Rightarrow \frac{-2 \quad 0 \quad 2}{- \quad + \quad - \quad +} \Rightarrow D_f = (-2, 0) \cup (2, +\infty)$$

3

$$\text{الف.) } \frac{n-2}{t^2 - 2t - n} > 0 \xrightarrow{n^2 = t} \frac{-2 \quad 2}{- \quad + \quad +} \Rightarrow D_f = (-2, +\infty) - \{2\}$$

4

$$\text{ب.) } \{-2[-n] \neq 0 \Rightarrow [-n] \neq 2 \Rightarrow \begin{aligned} -n > 2 &\Rightarrow n < -2 \\ -n < 2 &\Rightarrow n > -2 \end{aligned} \Rightarrow D_f = (-\infty, -2] \cup (-2, +\infty)$$

$$\text{الف.) صورت: } n(n-1)(n+1) > 0 \Rightarrow \frac{-1 \quad 0 \quad 1}{- \quad + \quad - \quad +} \Rightarrow n \in [-1, 0] \cup [1, +\infty) \quad (I)$$

$$\text{مخرج: } |n| + n > 0 \rightarrow \begin{aligned} &\text{Graph of } y = |x| + x \text{ is shown, which is } y = 2x \text{ for } x \geq 0 \text{ and } y = 0 \text{ for } x < 0. \\ &\Rightarrow n > 0 \quad (II) \Rightarrow D_f = [1, +\infty) \end{aligned}$$

5

$$\text{ب.) } (1) |n| \neq 1 \Rightarrow n \neq \pm 1 \quad I$$

$$\begin{aligned} (2) |n-2| - n^2 > 0 &\Rightarrow n^2 - |n-2| < 0 \\ &\begin{cases} n > 2 \Rightarrow n^2 - n + 2 < 0 \Rightarrow \Delta < 0 \Rightarrow \text{غیر ممکن} \\ n < 2 \Rightarrow n^2 + n - 2 < 0 \Rightarrow \frac{-2 \quad 1}{+ \quad - \quad +} \Rightarrow n \in [-2, 1] \quad II \end{cases} \\ \text{INII} \Rightarrow D_f = [-2, 1) - \{-1\} \end{aligned}$$

$$\text{الف.) } (n-2)[n-2] > 0 \Rightarrow \frac{2 \quad 2}{+ \quad - \quad +} \Rightarrow D_f = \mathbb{R}$$

6

$$\text{ب.) } |n-1|[n-2] > 0 \Rightarrow \frac{1 \quad 2 \quad 2}{- \quad - \quad - \quad +} \Rightarrow D_f = [2, +\infty) \cup \{1\}$$

$$||x-y|-1|-K \neq 0 \Rightarrow |x-y|-1 \neq K \Rightarrow \begin{cases} |x-y|-1 \neq K \Rightarrow |x-y| \neq K+1 \\ |x-y|-1 \neq -K \Rightarrow |x-y| \neq 1-K \end{cases}$$

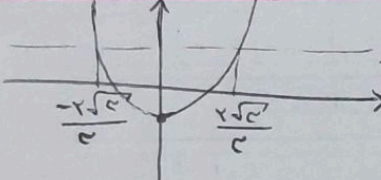
$$\Rightarrow \begin{cases} x-y \neq K+1 \Rightarrow x \neq K+y \\ x-y \neq -K-1 \Rightarrow x \neq 1-K \\ x-y \neq 1-K \Rightarrow x \neq y-K \\ x-y \neq K-1 \Rightarrow x \neq K+1 \end{cases} \xrightarrow[\text{مرد ندارد}]{\text{دانشه}} K+1 = y-K \Rightarrow K=1$$

$$D_f = R - \{-2, -1, 1\} \Rightarrow x=y \Rightarrow x^2 - 4x + 4 = 0 \Rightarrow (x-2)^2 = 0 \Rightarrow x=2$$

یک ریشه دارد

$$\begin{array}{ll} x > 0 & \text{I} \\ x+1 > 0 \Rightarrow x > -1 & \text{II} \\ x+1 \neq 1 \Rightarrow x \neq 0 & \text{III} \end{array} \quad \log_{\frac{1}{x}} > 0 \Rightarrow \log_{\frac{1}{x}}^n > 0 \Rightarrow x < 1 \quad \text{IV}$$

(استیبل هست) $D_f = (0, 1)$

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


$$\begin{array}{c} > x^2 - 1 < 0 \\ -\frac{\sqrt{2}}{2} & \frac{\sqrt{2}}{2} \\ + \quad | \quad - \quad | \quad + \end{array} \Rightarrow D_f = \left[-2 \frac{\sqrt{2}}{2}, 2 \frac{\sqrt{2}}{2} \right]$$