

الف) $\frac{n-1}{n} - \frac{n}{n-1} \rightarrow \frac{-2n+1}{n^2-n}$

$\frac{1}{n} \rightarrow \frac{1}{n(n-1)}$

$\frac{1}{n} - \frac{1}{n-1} = \frac{-1}{n(n-1)}$

$(-\infty, 0) \cup [\frac{1}{n}, 1)$ ✓

ب) $\frac{1}{n-1} + \frac{1}{n+2} \neq 0 \rightarrow n \neq -\frac{2}{3}$

$n+1 \neq 0$
 $n \neq 0$
 $n-1 \neq 0$
 $n+2 \neq 0$

$D_f = \mathbb{R} \setminus \{-\frac{2}{3}, -1, 0, -2\}$ ✓

الف) $\frac{-2}{n} \leq \frac{5}{n+1}$

$\frac{-2}{n} \leq \frac{5}{n+1} \Rightarrow \frac{-2(n+1)}{n(n+1)} \leq \frac{5}{n(n+1)}$

$-2(n+1) \leq 5$

$-2n-2 \leq 5$

$-2n \leq 7$

$n \geq -\frac{7}{2}$

دامنه چی شد پس؟

$D = (-\infty, -\frac{7}{2}] \cup [\frac{5}{n}, +\infty)$

ب) $\sqrt{n-1} \geq 2 \Rightarrow n-1 \geq 4$

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$n \geq 5$

$D = [5, +\infty)$

عبارت درجه دو با a ضریب می باشد پس دامنه باید بین دو عدد باشد، ضرایب عبارت زیر را کمال هست

$0 = 3-2a-2 \rightarrow a = -\frac{1}{2}$ ✓

صحنه باشد $[-2, b]$ پس از $\frac{1}{2}$ است و ضرایب می باشد

$-x^2 - \frac{1}{2}x + 3$

$\Delta = \frac{1}{4}$ $x = \frac{1}{2}$ $D_f = [-2, \frac{1}{2}]$ $b = \frac{1}{2}$ ✓ $a+b \rightarrow -\frac{1}{2} + \frac{1}{2} = 0$ ✓

$I = x^2 - x + 2 > 0 \Rightarrow (x-2)(x+1) > 0 \Rightarrow I = (-\infty, -1) \cup (2, +\infty)$

$II = x^2 - 1 \geq 0 \Rightarrow (x-1)(x+1) \geq 0 \Rightarrow II = (-\infty, -1] \cup [1, +\infty)$

$I \cap II = D_f = (-\infty, -1) \cup (2, +\infty)$ ✓

$I \rightarrow x \geq 1$ $II \rightarrow x \geq 1$ $III \rightarrow x < 1$

$I \cap II \rightarrow x \geq 1$

$III \cap I \rightarrow x < 1$

$D = [-2, +\infty)$

$$r(a+1)(\Delta, r) \rightarrow 11a + 11^r$$

$$f(1) \xrightarrow{\text{نقطة}} u > 1$$

$$f(1.2) \xrightarrow{\text{نقطة}} u \leq 1$$

$$f(1.2) \rightarrow 11a - 1$$

$$r f(1) = f(1.2) + a \rightarrow 11a + 11^r = 11a - 1 \rightarrow 10a = -11 \rightarrow a = -1.1$$

0

$$\Delta f(n) = 10n^2 + 11 \rightarrow f(n) = -\frac{1}{3}n^3 - \frac{11}{2}n$$

$$\begin{cases} f(n) \rightarrow r f(n) - r^2 f(-n) = 10n^2 - 11 \times r \\ f(-n) \rightarrow r f(-n) - r^2 f(n) = 10n^2 + 11 \times r \end{cases} \rightarrow \begin{cases} r f(n) - r^2 f(-n) = 10n^2 - 11r \\ r f(-n) - r^2 f(n) = 10n^2 + 11r \end{cases}$$

(1)

$$\begin{cases} f(1) \rightarrow r f(1) - 0 = 0 - 0 + 11m - 1 \\ f(1.2) \rightarrow 0 + r f(1) = 11 + 11m + 11m - 1 \end{cases} \rightarrow \begin{cases} r f(1) = 11m - 1 \\ r f(1) = 11m + 10 \end{cases} \rightarrow -r f(1) = 11m - 11$$

$$f(1) = -11m + \frac{11}{r}$$

$$f(1) = \frac{11}{r}$$

$$f(1.1) \rightarrow f(1.1) + f(1.1) = \frac{11 + 11 + 11}{-1} \rightarrow f(1.1) = -11 \rightarrow f(1.1) = -9$$

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