

الف) $(n-1)(2n^2+5n-3) \neq 0 \rightarrow (n-1)(2n-1)(n+3) \neq 0$
 $D_f = \mathbb{R} - \{1, \frac{1}{2}, -3\}$

ب) $(n+1)(2n^2+7n+3) \neq 0 \rightarrow (n+1)(2n+1)(n+3) \neq 0$
 $D_f = \mathbb{R} - \{-3, -1, -\frac{1}{2}\}$

الف) $(n-1)(n^2-n+1) \neq 0$
 $D_f = \mathbb{R} - \{1\}$

ب) $\frac{n+2}{n^3-2n^2+n-1} \geq 0 \rightarrow \frac{n+2}{(n-1)(n^2-n+1)} \geq 0$
 $D_f = (-\infty, -2] \cup (1, +\infty)$

$y = \frac{2}{n^2-\delta(n-1)-2n+\delta} \rightarrow n^2-\delta(n-1)-2n+\delta \neq 0$

$\begin{cases} n-1 \geq 0 \rightarrow n \geq 1 \rightarrow n^2-\delta n+\delta-2n+\delta \neq 0 \rightarrow n^2-(\delta+2)n+2\delta \neq 0 \rightarrow (n-2)(n-\delta) \neq 0 \\ n-1 < 0 \rightarrow n < 1 \rightarrow n^2-\delta(-n+1)-2n+\delta \neq 0 \rightarrow n^2+\delta n-\delta-2n+\delta \neq 0 \rightarrow n^2+(\delta-2)n \neq 0 \end{cases}$
 $D_f = \mathbb{R} - \{2, \delta, 0, -2\}$

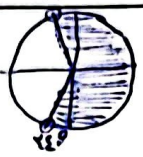
الف) $|2n+1| - |n+3| \neq 0 \rightarrow (2n+1)^2 - (n+3)^2 \neq 0 \rightarrow 3n^2+2n-8 \neq 0$
 $D_f = \mathbb{R} - \{-\frac{8}{3}, 2\}$

ب) $|2n+1| - |n+3| \geq 0 \rightarrow (2n+1)^2 - (n+3)^2 \geq 0 \rightarrow 3n^2+2n-8 \geq 0$
 $D_f = (-\infty, -\frac{8}{3}] \cup [2, +\infty)$

الف) $\begin{cases} 1 - \log_{\frac{1}{\mu}} n \geq 0 \rightarrow \log_{\frac{1}{\mu}} n \leq 1 \rightarrow n \leq \mu \\ n < 0 \end{cases} \xrightarrow{a} D_f = (0, \mu)$

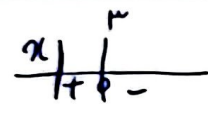
ب) $\begin{cases} n > 0 \\ 1 - \log_{\frac{1}{\mu}} n \geq 0 \rightarrow \log_{\frac{1}{\mu}} n \leq 1 \rightarrow n \leq \mu \end{cases} \xrightarrow{a} D_f = (\frac{1}{\mu}, +\infty)$

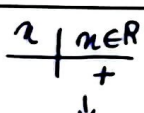
$$\begin{cases} r_{n-1} > 0 \rightarrow \boxed{x > \frac{1}{r}} \\ \log(r_{n-1}) > 0 \rightarrow r_{n-1} > 1 \rightarrow \boxed{x > 1} \xrightarrow{D} (1, \infty) \\ \log \log(r_{n+1}) > 0 \rightarrow \log r_{n-1} < 1 \rightarrow r_{n-1} < e \rightarrow \boxed{x < 3} \end{cases}$$

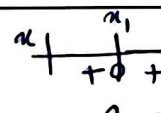
الف) $r \cos x + 1 > 0 \rightarrow \cos x > -\frac{1}{r} \rightarrow$  $\rightarrow D_f = (2k\pi - \frac{\pi}{r}, 2k\pi + \frac{\pi}{r})$

ب) $\log \frac{a-1}{a+1} > 0 \rightarrow \frac{a-1}{a+1} > 1 \rightarrow \frac{a-1-a-1}{a+1} > 0 \rightarrow \frac{-2}{a+1} > 0 \rightarrow a < -1 \rightarrow D_f = (-\infty, -1)$

ج) $\frac{a-1}{a+1} > 0 \rightarrow \frac{-1}{a+1} > 0 \rightarrow a < -1 \rightarrow (-\infty, -1) \cup (1, \infty)$

$\frac{x}{x+1} > \frac{1}{r} \rightarrow$  $\rightarrow$ $a+r=0 \rightarrow \boxed{a=-r} \rightarrow \sqrt{-2a+b} \xrightarrow{a=r} \sqrt{-4+b}=0 \rightarrow \boxed{b=4}$

$\frac{x}{x+1} > \frac{1}{r} \rightarrow$  $\downarrow$ $a < 0 \rightarrow \dots$

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$\begin{cases} \varepsilon - x^2 > 0 \rightarrow x^2 < \varepsilon \rightarrow \sqrt{\varepsilon} < x < \sqrt{\varepsilon} \\ [x] + [-x] + 1 \neq 0 \rightarrow [x] + [-x] \neq -1 \end{cases} \xrightarrow{D} D_f = \{-2, -1, 0, 1, 2\}$

$\begin{cases} x \in \mathbb{Z} \rightarrow [x] + [-x] = 0 \\ x \notin \mathbb{Z} \rightarrow [x] + [-x] = -1 \end{cases}$

در دامنه این تابع $\frac{1}{x}$ عدد صحیح و مجرب دارد.