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$$\frac{x^3 + 3x^2 - 11x + 3}{x^2 + 2x - 1} \rightarrow 1$$

$$\hookrightarrow x^3 + 3x^2 - 11x + 3 - (x^2 + 2x - 1) = x^2 + x - 12$$

$$\hookrightarrow \frac{x^2 + x - 12}{x^2 + 2x - 1} \rightarrow 1$$

$$\hookrightarrow x^2 + x - 12 - (x^2 + 2x - 1) = -x - 11$$

$$\hookrightarrow \frac{-x - 11}{x^2 + 2x - 1} = -\frac{1}{x+1} - \frac{10}{x^2 + 2x - 1}$$

$$\Rightarrow \frac{u+v}{(u^2+9v^2+10uv+5v)} = \frac{u+v}{(u^2+vu+v^2)(u+1)} \rightarrow -1$$

$$\hookrightarrow u^2+vu+v^2 \Rightarrow (u+v)^2 \xrightarrow{-4} \xrightarrow{-1} \Rightarrow Df: R - \{-\frac{1}{5}, -1, -\frac{1}{5}\}$$

$$\text{الف) } \frac{n+3}{n^2-2n^2+3n-1} = \frac{n+3}{(n^2-n+1)(n-1)} \Rightarrow R = \frac{1}{1}$$

$$y = \frac{r}{r^2 - a|n-1| - r + d}$$

$$r^2 - a|n-1| - r + d = 0$$

$$r^2 - a|n-1| - r + d = 0 \Rightarrow r^2 + r \neq 0$$

$$(n+r)n \neq 0$$

$$-p \leq \dots$$

$$R = \{r, a\}$$

$$\Rightarrow y = \frac{2x^2 + 4}{[x^2] - x[x] - x^2} \Rightarrow \begin{matrix} ([x] - x)([x] + 1) \\ \downarrow [x] = x \\ [x] = x \\ \hookrightarrow [x] = -1 \\ \hookrightarrow [x] = -1 \end{matrix} \Rightarrow R_2[x, 2] \cup [-1, 0]$$

هزده سوال های دانه ی تو ابرو ای را معاً با دست بخوان

$$1) \sqrt{\left[n - \frac{1}{\mu}\right] + \left[n + \frac{\nu}{\mu}\right]} \Rightarrow \nu[n] \geq \frac{-1}{\mu}$$

$\sqrt{\left\lfloor \frac{n-1}{p} \right\rfloor} + \left\lfloor \frac{1}{p} - a \right\rfloor \Rightarrow \sqrt{\lfloor n \rfloor + \lfloor -a \rfloor} \Rightarrow \lfloor n \rfloor + \lfloor -a \rfloor \geq 0$
 $\Leftrightarrow Df = \mathbb{Z}$
 جدول صفی آخر!

(د) $\frac{\cot u + 1}{\csc u + 1} \neq 0 \Rightarrow \text{د } R - \left\{ k\pi - \frac{\pi}{2}, k\pi + \frac{\pi}{2}, k\pi \right\}$ (9)

$\csc u \neq -1$, $\cot u \neq 0$, $\cot \neq \sin \neq 0$

$y = \arcsin(n^r + r(n+1)) \Rightarrow \frac{1}{2}n^r + r(n+1) \leq 1$
 $\hookrightarrow n^r + r(n+1) \leq 2 \Rightarrow n(n+r) \leq 2$
 $\hookrightarrow n^2 + rn + r \geq 0$
 $\hookrightarrow (n+r)(n+1) \geq 1$
 $\Rightarrow [-r, r] \cup [1, \infty)$

$\Rightarrow \text{b) } \text{Geg: } \sqrt{a+2n} \Rightarrow a+2n \geq 0 \quad \Delta \text{ not}$
 $a \geq -2n \Rightarrow \frac{a}{2} \geq -n$
 $\rightarrow -1 \leq a+2n \leq 1 \Rightarrow -4 \leq -2n \leq -2$
 $n \geq 2 \Rightarrow n$
 $\Rightarrow D_f = \left[\frac{a}{2}, \frac{a}{2} \right]$

$y = \log_{\frac{1}{r}}(1 - \log_{\frac{1}{r}} \frac{1}{r}) \Rightarrow n > 0 \Rightarrow \log_{\frac{1}{r}} \frac{1}{r}$
 وقتی متناهی‌ها را است بهت عوض می‌شود $\Rightarrow D_f = \left(\frac{1}{r}, \infty \right)$
 $\log_{\frac{1}{r}} \frac{1}{r} < 1 \Rightarrow \frac{1}{r} > n$
 $1 > \log_{\frac{1}{r}} \frac{1}{r} \Rightarrow \frac{1}{r} > n$

$$\Rightarrow \left(\frac{r_{n+d}}{r_{n+2}} \right)! \Rightarrow \frac{r_{n+d}}{r_{n+2}} \in W \Rightarrow - \frac{r_{d-2}}{r_{d-1}} = \frac{-2W+d}{r_{d-1}}$$

۵ - الف) $\left\lfloor n - \frac{1}{r} \right\rfloor + \left\lfloor n + \frac{r}{r} \right\rfloor \geq 0 \xrightarrow{+1} \left\lfloor n - \frac{1}{r} \right\rfloor + 1 + \left\lfloor n + \frac{r}{r} \right\rfloor \geq 1$ [n] + k = [n+k]

$\left\lfloor n + \frac{r}{r} \right\rfloor + \left\lfloor n + \frac{r}{r} \right\rfloor \geq 1 \rightarrow \left\lfloor n + \frac{r}{r} \right\rfloor \geq \frac{1}{2}$ اولین عدد صحیح بعد از $\frac{1}{r}$ برابر یک است! $n + \frac{r}{r} \geq 1$

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

۵ - ب) $\left\lfloor n - \frac{1}{r} \right\rfloor + \left\lfloor -n + \frac{1}{r} \right\rfloor \geq 0$

مردانیم:

$\left\lfloor n \right\rfloor + \left\lfloor -n \right\rfloor \begin{cases} n \in \mathbb{Z} & 0 \checkmark \\ n \notin \mathbb{Z} & -1 \times \end{cases} \rightarrow \left\lfloor n - \frac{1}{r} \right\rfloor \in \mathbb{Z} \rightarrow n \in \mathbb{Z} + \frac{1}{r}$

$D_f = \left\{ n \mid n = k + \frac{1}{r}, k \in \mathbb{Z} \right\}$

۹ - ب) $y = \log_r \left(1 - \log^{\frac{n}{r}} \frac{1}{r} \right) \rightarrow \log^{\frac{n}{r}} \frac{1}{r} \rightarrow n > 0$

$\hookrightarrow 1 - \log^{\frac{n}{r}} \frac{1}{r} > 0 \rightarrow \log^{\frac{n}{r}} \frac{1}{r} < 1$ منابعین (۱ و ۰) $\rightarrow n > \frac{1}{r}$

$D_f = \left(\frac{1}{r}, +\infty \right)$