

۲۰ عالی نوشت

$$\left. \begin{array}{l} n < \omega \rightarrow \{n+2-n+1 \leq 3n+\varepsilon\} \rightarrow n \geq \frac{-\varepsilon}{3} \\ n \geq \omega \rightarrow \{n-1-n+1 \geq n\} \rightarrow n \geq \omega \end{array} \right\}$$

$$\Rightarrow \frac{-\varepsilon}{3} \leq n < \omega \Rightarrow D_f = \left[\frac{-\varepsilon}{3}, \omega \right)$$

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$$\frac{3(1n^2 + 1n^2 + 4n + 1)}{(2n+1)^2} = \frac{3(2n+1)^2}{(2n+1)^2} = \frac{3}{2n+1} \rightarrow n = -\frac{1}{2}$$

$$\Rightarrow D_f = \mathbb{R} - \left\{ \frac{1}{2} \right\}$$

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$$f(n) = \begin{cases} \frac{n^2 + 2n^2 - n - 2}{n^2 - 1} \rightarrow \frac{n^2(n+2) - (n+2)}{n^2 - 1} \rightarrow \frac{(n+2)(n^2 - 1)}{n^2 - 1} \rightarrow n+2 \\ \frac{an+b}{n+b} \end{cases}$$

$\hookrightarrow C=2$
 $\rightarrow g(n) = n+2 \rightarrow n=1$

$$\frac{a+2}{b+1} = 2, \quad \frac{-a+2}{b-1} = 1 \Rightarrow \begin{cases} 2b-a=1 \\ a+b=1 \end{cases} \Rightarrow \begin{cases} 2b-a=1 \\ a+b=1 \end{cases} \Rightarrow \begin{cases} 2b-a=1 \\ a+b=1 \end{cases} \Rightarrow \begin{cases} 2b-a=1 \\ a+b=1 \end{cases}$$

$$\rightarrow 2b-a=1 \rightarrow 2b+a=1 \Rightarrow \begin{cases} 2b-a=1 \\ 2b+a=1 \end{cases} \Rightarrow \begin{cases} 2b-a=1 \\ 2b+a=1 \end{cases} \Rightarrow \begin{cases} 2b-a=1 \\ 2b+a=1 \end{cases}$$

$$\rightarrow 2b-a=1 \rightarrow 2b+a=1 \Rightarrow \begin{cases} 2b-a=1 \\ 2b+a=1 \end{cases} \Rightarrow \begin{cases} 2b-a=1 \\ 2b+a=1 \end{cases}$$

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$$f(n) = \frac{n+1}{n-c} = \frac{n^2-1}{n^2+an+b} \rightarrow (n-1)(n-c)$$

$C=1$ (دوینها برابر)

$$n^2+an+b, (n-1)^2 \rightarrow n^2-2n+1$$

$$\rightarrow a=-2, b=1, c=1 \rightarrow a+b+c=0$$

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$$(n-2)^2(n) + (-n-2)^2(-n)$$

$$= n^3 - 4n^2 + 4n - n^3 - 4n^2 - 4n = -8n^2$$

$$(n^2 - \varepsilon n + \varepsilon)n + (n^2 + \varepsilon n + \varepsilon)(-n)$$

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$$1 - \sqrt{n} \leq -1 \quad 1 - \sqrt{n} \leq \mu$$

$$\rightarrow n = 1 \quad \rightarrow n = -1$$

$$\rightarrow f(-1) + f(\mu) \leq \frac{\varepsilon \sqrt{1} + \sqrt{-1} + \mu}{\varepsilon} = \textcircled{\omega}$$

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$$n + \sqrt{n} \leq 4 \rightarrow n + \sqrt{n} - 4 \leq 0 \xrightarrow{n=\varepsilon} \varepsilon^r + \sqrt{\varepsilon} \leq 4 + 1 \sqrt{\varepsilon} \sqrt{\varepsilon}$$

$$\rightarrow (n + \mu)(\sqrt{n} - 1)$$

$$\leftarrow \mu$$

$$n \leq \varepsilon$$

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$$(n-1)^r + (n-1)^r (1-n)^r + (1-n)^r = (n-1)^r - (n-1)^r, \textcircled{\omega}$$

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$$f(n) = \sqrt{\varepsilon n - \mu n} + k - 1 \quad g(n) = \sqrt{b - \varepsilon n} + \mu k$$

$$\leftarrow$$

$$n \geq \frac{\mu a}{\varepsilon}$$

$$\frac{b}{\varepsilon} \geq n$$

$$\rightarrow \frac{\mu a}{\varepsilon} = \frac{b}{\varepsilon} = 1 \rightarrow b \leq \varepsilon, a \leq \frac{\varepsilon}{\mu}$$

$$\rightarrow \mu a - \frac{b}{\varepsilon} = k \leq \mu \times \frac{\varepsilon}{\mu} - \frac{\varepsilon}{\varepsilon} + 1 = \textcircled{\mu}$$

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$$r(\sqrt{\varepsilon - \varepsilon} + k - 1) - (\sqrt{\varepsilon - \varepsilon} + \mu k) \leq k \rightarrow r k - r - \mu k \leq k \rightarrow k \leq -1$$

$$f(n) = \sqrt{m - n} + n \quad g(n) = \sqrt{\mu n + r} \quad D_{f \circ g} = [1, \mu] \quad f \circ g(n) = \sqrt{\mu n}$$

$$n \geq n$$

$$\rightarrow m = \mu$$

$$\rightarrow m + n \leq ?$$

$$\mu + 1 \sqrt{\mu} - r \leq \omega + 1 \sqrt{\mu}$$

$$\rightarrow \sqrt{\mu - \mu} + n - \frac{\sqrt{\mu \mu + r}}{\sqrt{\mu}} = \mu + n - \sqrt{\mu} = \sqrt{\mu}$$

$$\rightarrow n = 1 \sqrt{\mu} - r$$

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10