

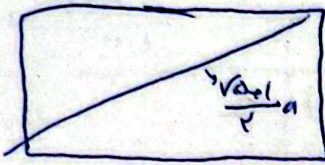
$$S_2 \leq L_{2 \times n}$$

$$S_1 = L_{1 \times n}$$

$$\Rightarrow \frac{S_2}{S_1} = \frac{L_{2 \times n}}{L_{1 \times n}} = \frac{\frac{1+\sqrt{5}}{2} \times n}{\frac{1}{2} \times n} = \frac{1+\sqrt{5}}{1} \checkmark$$

(۱)

(۲)



$$a^2 + b^2 = \frac{1+\sqrt{5}}{2} a^2 \Rightarrow b^2 = \frac{1+\sqrt{5}}{2} a^2$$

(۳)

(۴)

$$\Rightarrow \frac{a}{b} = \frac{\sqrt{5}-1}{2} \checkmark$$

$$a^2 - 1^2 a + 1^2 a + 1^2 a + 1^2 a \Rightarrow \sqrt{a^2 - (1^2 + 1^2 + 1^2 + 1^2)} \Rightarrow \frac{1}{\sqrt{5}} \times n$$

(۵)

(۶)

$$a^2 - 1^2 a + 1^2 a \Rightarrow (a - 1^2)(a + 1^2)$$

$$a = \frac{1}{\sqrt{5}} \Rightarrow \frac{a}{\frac{1}{\sqrt{5}}} = \frac{a}{1} = \frac{1}{\sqrt{5}} \checkmark$$

$$\sqrt{n+1} \left( \frac{1}{\sqrt{n-1}+n} - \frac{1}{\sqrt{n-1}} \right) = \sqrt{n+1} \Rightarrow \frac{\sqrt{n+1} (n - \sqrt{n-1} - \sqrt{n-1} - n)}{n^2 - n} = \sqrt{n+1}$$

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(۸)

$$\sqrt{n+1} \left( \frac{-1-\sqrt{n-1}}{1-n} \right) = \sqrt{n+1} \Rightarrow -1-\sqrt{n+1} = \frac{n+1}{1-n}$$

$$1 + \sqrt{n+1} = \frac{n+1}{1-n} \Rightarrow \sqrt{n+1} = \frac{n+1}{1-n} - 1 = \frac{n+1 - (1-n)}{1-n} = \frac{2n}{1-n}$$

$$\sqrt{1-n} \leq t \Rightarrow \frac{1}{t+1} + \frac{1}{t-1} \leq \frac{1}{t} \Rightarrow \frac{t-1+t+1}{t^2-1} \leq \frac{1}{t}$$

$$\frac{2t}{t^2-1} \leq \frac{1}{t} \Rightarrow t^2 - 1 \leq 2t \Rightarrow t^2 - 2t - 1 \leq 0 \Rightarrow t \leq 1 + \sqrt{2}$$

(۹)

(۱۰)

$$\sqrt{1-n} \leq \sqrt{1-n} \Rightarrow n \leq 1 \checkmark$$

$$\frac{(1-n)^n n^n}{n^n (1-n)^n} \leq \frac{14}{9} \Rightarrow \frac{n^n - n_{n+1}}{n^n (n-1)^n} \leq \frac{14}{9}$$

$$n^n - n_{n+1} \leq \frac{n^n (n-1)^n}{9} \Rightarrow \frac{n^n - n_{n+1}}{n^n} \leq \frac{(n-1)^n}{9} \Rightarrow \frac{n^n - n_{n+1}}{n^n} \leq \frac{14}{9}$$

$$\Rightarrow \left( \frac{n+1}{n} \right)^n = \frac{149}{9} \Rightarrow \frac{n+1}{n} \leq \frac{14}{9} \Rightarrow n \leq \frac{9}{5}$$

$$\frac{n+1}{n} \leq -\frac{14}{9} \Rightarrow n \leq -\frac{9}{14}$$

$$n^n - n \leq \frac{n^n}{9} \Rightarrow n^n - n - \frac{n^n}{9} \leq 0 \Rightarrow S_1 \leq 1$$

$$n^n - n \leq -\frac{n^n}{14} \Rightarrow n^n - n + \frac{n^n}{14} \leq 0 \Rightarrow S_2 \leq 1 \Rightarrow S_1 + S_2 \leq 2 \checkmark$$

$$-n^n \leq n^n (1-n) \Rightarrow (n^n - n^n) / (1-n) \Rightarrow \frac{-n^n}{1-n} = \frac{n^n}{n-1}$$

$$(n-1) \cup [1, n]$$

$$-n^n \leq n^n - 1 \Rightarrow (n-1)(n^n) \geq 0 \Rightarrow \frac{n^n}{n-1} \geq 0$$

$$I \cap II \Rightarrow \{2\} \checkmark$$

$$n \leq 1 \Rightarrow n \leq 1 \Rightarrow \{1\}$$

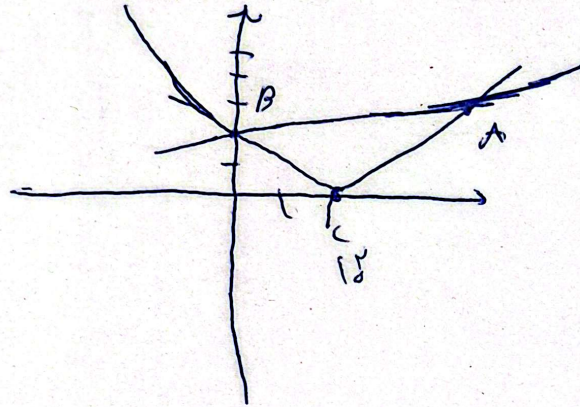
$$y \leq |n+1| + |n-1| \Rightarrow \begin{cases} y \leq n+1 & n \geq 1 \\ y \leq n & -1 \leq n \leq 1 \\ y \leq -n-1 & n \leq -1 \end{cases}$$

$$\begin{cases} |n+1| \leq -\frac{1}{n} n + \frac{1}{n} \Rightarrow n \leq 1 \Rightarrow \text{مطلوب} \\ |n+1| \leq -\frac{1}{n} n + \frac{1}{n} \Rightarrow n \leq 1 \Rightarrow \text{مطلوب} \\ |n-1| \leq -\frac{1}{n} n + \frac{1}{n} \Rightarrow n = -1 \Rightarrow \text{مطلوب} \end{cases} \Rightarrow A \cup B = C$$

$$\overline{AB} = \sqrt{(4)^n + (-1)^n} \leq \sqrt{5} \leq \sqrt{5} \leq \sqrt{5} \checkmark$$

$$y = \sqrt{n^p - n^p \epsilon} = \sqrt{(n-p)^p} = |n-p|$$

$$y' = \frac{1}{p} n^{p-1}$$



$$n-p \leq \frac{1}{p} n^{p-1} \leq n-1 \leq y$$

$n \geq p$

$$-n-p \leq \frac{1}{p} n^{p-1} \leq n \leq y$$

$n \leq p$

$$\Delta |y| \quad |B|$$

$$AB = \frac{1}{p} n^{p-1}$$

$$y - n - p \leq 0$$

$$\frac{1-p-p}{\sqrt{a}} \left( \frac{y}{\sqrt{a}} \leq CH \right)$$

$$S = \frac{\epsilon \sqrt{a} \cdot \frac{y}{\sqrt{a}}}{n} \leq (1-p) \checkmark$$

$$AB = \sqrt{n^p - n^p \epsilon} = \epsilon \sqrt{a}$$

$$\frac{n^{p-1} n^p}{n^{p-1} n^p} \leq \frac{1}{p}$$

$$n^{p-1} n^p \leq p \cdot n^{p-1}$$

$$n^{p-1} n^{p-1} \leq n^{p-1} \leq n^{p-1}$$

$n \leq p$

$n \leq a$

$CH \leq 1$

شماره ۱ در ساعت

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