

تابع نیست زیرا برای هر ضروبی a $g(a)$ وجود دارد

$$a=2 \rightarrow \begin{matrix} \nearrow \omega \\ \searrow -f \end{matrix}$$

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$$f(a) = -\varepsilon \leq \omega \leq x$$

$$a f(a-x) = -x \leq \omega \leq 4 \leq v \leq x$$

$$\frac{a f(a-x)}{f(a)} \geq 0$$

$$(-4 \leq x) \cup [0 \leq x) \cup [v \leq +\infty)$$

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$$\text{الف) } a(a^2 - 4) = 0 \rightarrow a(a-2)(a+2) = 0 \rightarrow a = 0 \leq -2 \leq 2$$

$$\mathbb{R} - \{0 \leq x \leq -2\}$$

$$\text{ب) } \sqrt{\frac{2a^2 - 5a + 2}{a^3 - 4a}} \rightarrow \frac{2a^2 - 5a + 2}{a^3 - 4a} \geq 0 \rightarrow \Delta < 0 \quad \text{همیشه}$$

$$a^3 - 4a \geq 0 \rightarrow a \leq -2 \leq 2 \rightarrow \frac{-2}{-2} + \frac{0}{0} - \frac{2}{2} \rightarrow [-2 \leq 0] \cup [2 \leq +\infty)$$

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$$\text{الف) } a^2 \geq 2 \rightarrow \begin{matrix} \nearrow a \geq 2 \\ \searrow a \leq -2 \end{matrix} \rightarrow \frac{2}{2} \leq \frac{a^2}{2} \leq \frac{1}{2} \rightarrow \frac{2}{2} \leq \frac{a^2}{2} \leq \frac{1}{2}$$

$$\frac{-2}{-2} + \frac{0}{0} - \frac{2}{2} \rightarrow (-2 \leq +\infty)$$

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$$\text{ب) } \varepsilon - 2[-a] \leq 0 \rightarrow [-a] \leq 2 \rightarrow 2 \leq a \leq 2$$

$$\rightarrow -2 \leq a \leq 2 \rightarrow (-2 \leq 2)$$

$$\text{الف) } \sqrt{a(a^2 - 1)} = a(a^2 - 1) \geq 0 \rightarrow a = 0 \leq 1 \leq -1 \rightarrow \frac{1}{-1} + \frac{0}{0} - \frac{1}{-1} \rightarrow [-1 \leq 0] \cup [1 \leq +\infty)$$

$$\sqrt{|a| + a} \rightarrow |a| + a \geq 0 \rightarrow [1 \leq +\infty) \rightarrow [1 \leq +\infty)$$

$$\text{ب) } \sqrt{|a^2| - a^2} \rightarrow |a - 2| - a^2 \geq 0 \rightarrow |a - 2| \geq a^2 \rightarrow \begin{matrix} \nearrow a \leq 2 \\ \searrow a \geq 2 \end{matrix} \rightarrow \begin{matrix} \{a \leq 2\} \\ \{a \geq 2\} \end{matrix} \rightarrow \begin{matrix} [-2 \leq 2] \\ [2 \leq +\infty) \end{matrix}$$

$$|a| - 1 \leq 0 \rightarrow |a| \leq 1 \rightarrow a \leq \pm 1$$

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$$\text{a) } n-1 \geq 2$$

$$\rightarrow z[z] \geq 0 \xrightarrow{z \geq 0} R \cap \{R\}$$

$$\text{ب) } |n-1| \geq 0 \rightarrow n-1 \geq 0 \rightarrow n \geq 1$$

$$[n-1] \geq 0 \rightarrow n \geq 1 \xrightarrow{\Delta} \{1\} \cup [r_0 + \infty)$$

$$||n-1|-1| \geq k$$

$$|n-1|-1 \geq k \rightarrow |n-1| \geq k+1 \rightarrow \begin{cases} n-1 \geq k+1 \rightarrow n \geq k+2 \\ n-1 \leq -k-1 \rightarrow n \leq -k+1 \end{cases}$$

$$|n-1|-1 = -1 \rightarrow$$

$$|n-1| \geq -k+1 \rightarrow \begin{cases} n-1 \geq -k+1 \rightarrow n \geq -k+2 \\ n-1 \leq k-1 \rightarrow n \leq k+1 \end{cases}$$

$$k \geq 1 \text{ (مميز)}$$

$$n+1 \geq 0 \rightarrow n \geq -1$$

$$n-1 \geq 0 \rightarrow n \geq 1$$

$$n^2 + 2n + 1 \geq 0 \rightarrow \begin{cases} -1 \\ -1 \end{cases}$$

مميز

$$n^2 - 4n + 4 \geq 0$$

$$\Delta = 0$$

$$\therefore \text{مميز}$$

$$\log \frac{1}{n} \rightarrow \begin{cases} n > 0 \\ n \neq 1 \\ \frac{1}{n} > 0 \end{cases}$$

$$\frac{(0.61)}{\uparrow}$$

$$\log \log \frac{1}{n} \rightarrow \log \frac{1}{n} > 0$$

$$\log_{n+1} \rightarrow \begin{cases} n+1 > 0 \\ n > -1 \\ n+1 \neq 1 \rightarrow n \neq 0 \end{cases}$$

$$-1 \leq n^2 - 1 \leq 1$$

$$-1 \leq n^2 \leq 1 \rightarrow -\frac{1}{n} \leq n \leq \frac{1}{n} \rightarrow -\sqrt{\frac{1}{n}} \leq n \leq \sqrt{\frac{1}{n}}$$

$$= \left[-\frac{1}{\sqrt{n}}, \frac{1}{\sqrt{n}} \right]$$