

امیرکاسف

یادداشت

Date: ۱

Ref No:

Subject:

(الف) $y_1^r - r y_2^r - r y_{n-1}^r$

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تابع است

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$u \cos y = y \cos x \xrightarrow{u = \frac{x}{r}} \frac{x}{r} \cos y = 0$

$\rightarrow y = k\pi + \frac{\pi}{r} \mid k \in \mathbb{Z}$

تابع نیست

(ب) $\frac{u+y}{r} = \sqrt{ny} \quad u, y > 0 \Rightarrow u+y = r\sqrt{ny} \Rightarrow u+y - r\sqrt{ny} = 0$

$\rightarrow (\sqrt{u} - \sqrt{y})^2 = 0 \Rightarrow u = y$

تابع است

(ج) $ny^r + r y - y^r - r y = 0 \Rightarrow n(y^r + r) = y^r + r y \Rightarrow$

$n(y^r + r) = y(y^r + r) \Rightarrow n = y$ تابع است

$f(n) = \begin{cases} r n^r - b & ; |n-1| \geq r \\ a + r n & ; -r \leq n \leq -1 \end{cases} \rightarrow n \geq r \cup n \leq -1$

$n = -1 \rightarrow r - b = -1 + a \Rightarrow a + b = r$

$f(n) = \sqrt{a - b n - n^r} \quad \text{و} \quad f = [b, a]$

$\begin{array}{c} - \quad a \quad b \quad - \\ b \quad a \end{array}$

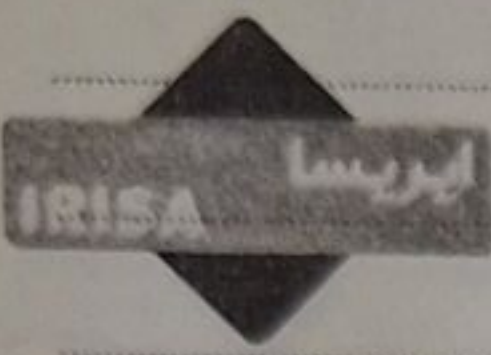
$f(n) = \sqrt{(-n+b)(n-a)} \Rightarrow (-n+b)(n-a) = -n^2 - b n + a$

$\Rightarrow -n^2 - a b + (b+a)n = -n^2 - b n + a$
 $\left. \begin{array}{l} a+b = -b \rightarrow a = -2b \\ -ab = a \rightarrow b = -1 \end{array} \right\} \rightarrow a = 2$

$a + b = 1$

$$g = \frac{r}{\sqrt{an^2 + bn + c}} \quad O f (-\infty, r)$$

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$$g = \frac{r}{\sqrt{bn + c}}$$

از دامنه می فرستد $a > 0$

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$$ra + c - |b| = 0 \quad 4c^2b = \text{b}$$

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$$f(n) = \sqrt{\frac{1}{|n| - [n]}} \rightarrow |n| - [n] \neq 0$$

$$u = R - \frac{1}{2} \Rightarrow O f - \frac{1}{2}$$

$$b) f(n) = \sqrt{n} \text{ or } \sqrt{y} = 1$$

$$n > 0 \Rightarrow \sqrt{y} = 4 - \sqrt{n} \Rightarrow 4 - \sqrt{n} > 0 \Rightarrow 4 > \sqrt{n} \Rightarrow n < 16$$

$$a) n_{n-1} > 0 \Rightarrow n > \frac{1}{n}, n \neq 1, g_n^{n-1} > 0 \Rightarrow$$

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$$n_{n-1} > 1 \quad n_n > 2 \Rightarrow n > \frac{1}{2} \Rightarrow O f = [\frac{1}{2}, +\infty) - \{1\}$$

$$b) \frac{1}{9 + \sqrt{n} - |n|} > 0 \Rightarrow \sqrt{|n|} = t \Rightarrow \frac{1}{-t^2 + 9} > 0$$

$$\begin{cases} \sqrt{n} = 3 \Rightarrow |n| < 9 \Rightarrow n < 9 \\ \sqrt{n} = -3 \end{cases}$$

ریشه های معادله است
آب بستنی ادویه

$$\sqrt{n} = -3 \Rightarrow O f = (-9, 9)$$

$$\frac{(n+a)n + r + ab}{n+ab} > 0 \Rightarrow R = -M$$

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$$b = 2 - r$$

$$f(n) = \begin{cases} \sqrt{n-1} & n \geq 1 \\ \sqrt{n} & n < 0 \end{cases}$$

$$\sqrt{n+3} \Rightarrow n \geq -\frac{3}{c}$$

$$O\left(-\frac{3}{c} + \infty\right)$$

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

$$m-a > 0 \Rightarrow m > a \Rightarrow n > \frac{a}{c} \quad (1)$$

$$1 - \frac{1}{c} m-a > 0 \Rightarrow 1 > \frac{1}{c} m-a \Rightarrow 1 > \frac{1}{c} m-a \Rightarrow m < a + c \quad (2)$$

$$(1), (2) \Rightarrow \frac{a}{c} < m < a + c \Rightarrow b > \frac{a}{c} \Rightarrow C < \frac{a}{c} < a$$

$$\Rightarrow \frac{a}{c} < a - \frac{a}{c} \Rightarrow \boxed{a < c - b}$$