

$$\frac{(n+r)^r + \omega}{(n+r)^r + 1} \rightarrow \frac{(\sqrt{n} - r + r)^r + \omega}{(\sqrt{n} - r + r)^r + 1} = \frac{\Delta}{\epsilon} = r$$

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

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شماره تکلیف = V

کلاس = چهارم

نام = هستی نارانی

(1)

$$y = n \cdot f(n) \geq 0$$

$$f(n) \in \mathbb{R} \rightarrow \begin{matrix} -\infty & 2 & 0 \\ + & - & + & - \end{matrix}$$

$$[0, \infty) \cap ([-\infty, -2] \cup [2, \infty)) = [2, \infty)$$

$n \geq 0$

$f(n) \geq 0$

$$\left\{ [-\infty, 0] \cup [2, \infty) \right\}$$

$$[-\infty, 0] \cap [-\infty, 2] = [-\infty, 0]$$

$n \leq 0$

$f(n) \leq 0$

$$\frac{-n}{f(n)} \geq 0$$

$$-n = 0 \rightarrow n = 0$$

$$f(n) = -\infty, 0, 2$$

$$\begin{matrix} -\infty & 2 & 2 \\ + & - & - & + \end{matrix}$$

$$(-\infty, 0) \cup (0, 2)$$

$$f(-r) = 1 \rightarrow f(-r) - \frac{r}{f(r)} = 1 \pm \epsilon$$

$$f(-r) - r f(r) = \epsilon + \eta + \epsilon \quad f(r) = -r$$

$$\frac{f(f(r))}{r} + \frac{f(f(1))}{\Delta} = 1 \pm \epsilon$$

$$f(n-1) = \frac{a(n-1)^2 - b(n-1) + r}{a(n^2+1-2n) - b n + b + r} \rightarrow f(n-1) - f(n) = \frac{a n^2 - r a n + a - b n + -\infty}{b + r - a n^2 + b n - r} =$$

$$-r a n + a + b = \eta n + r \rightarrow a = -r, b = \infty$$

$$a - b = -r - \infty = -\infty$$

$$-r a n + a + b$$

$$f(r) = 1 \quad \frac{r + \infty}{1} = \infty$$

$$f(r) = -1$$

$$f(-1) = \infty$$

$$\frac{r^2 f(r) - r f(-r)}{f(r)} = \frac{r^2 \infty - \infty}{\infty} = \frac{r^2}{\infty}$$

$$\frac{f(f(r)) - f(f(1))}{f(1) - r} = \frac{\infty - \infty}{\infty - \infty} = 0$$