

نام و نام خانوادگی آفرین پاسخنانه تشریحی تکلیف شماره ۳ کلاس (۱۰۰٪)

$$\begin{aligned} x > \omega &\rightarrow x_{n-1} - n + 1 \geq 0 \rightarrow [\omega, +\infty) \\ x < \omega &\rightarrow (x+3) - n + 1 \geq 0 \rightarrow x + \varepsilon \geq 0 \rightarrow x \geq -\varepsilon \rightarrow \left[-\frac{\varepsilon}{r}, \omega\right) \end{aligned} \quad \left\{ \left[-\frac{\varepsilon}{r}, +\infty\right) \right\}$$

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$$\frac{r(\Lambda x^r + r x^{r-1} + x_{n+1})}{(x_{n+1})^r} = \frac{r(x_{n+1})^r}{(x_{n+1})^r} = \frac{r}{x_{n+1}} \rightarrow (x_{n+1})^r \neq 0 \rightarrow x \neq -\frac{1}{r} \rightarrow D \cdot R - \left\{ -\frac{1}{r} \right\}$$

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$$\frac{x^r + r x^{r-1} - x - r}{x^r - 1} = \frac{(x+r)(x^r - 1)}{x^r - 1} = x + r \xrightarrow{x \neq 1, x \neq -1} x + r = x + c \rightarrow c = r$$

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$$\begin{aligned} x=1 &\rightarrow \frac{a+r}{1+b} = r \rightarrow a+r = r+b \\ x=-1 &\rightarrow \frac{-a+r}{-1+b} = 1 \rightarrow -a+b-1 \end{aligned} \quad \left\{ b = \frac{1}{r} \rightarrow b+c = \frac{1}{r} + r = \frac{r^2+1}{r} \right.$$

$$\frac{x+1}{x-c} = \frac{(x-1)(x+1)}{x^2+ax+b} \Rightarrow x^2+ax+b = \underbrace{(x-1)(x-c)}_{x^2-(c+1)x+c} \rightarrow a = -(c+1), b = c$$

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$$D_f = D_g \rightarrow x-c = (x-1)(x-c) \rightarrow c=1 \rightarrow a=-2, b=1, c=1 \rightarrow a+b+c=0$$

$$\begin{aligned} f(x_{n+1}) &= (x_{n+1}^r - r)^r (x_{n+1} + 1) = (x-r)^r x \\ f(1-x) &= ((1-x)^r - r)^r ((1-x) - 1) = (x+r)^r (-x) \end{aligned} \quad \left\{ g(x) = x(x-r)^r - x(x+r)^r = x[(x-r)^r - (x+r)^r] \right.$$

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$$g(x) = -\Lambda x \leftarrow x(-\Lambda x)$$

$1 - \sqrt{x} = -1 \rightarrow x = 1 \rightarrow f(-1) = \varepsilon \sqrt{1} = \varepsilon \checkmark$ $1 - \sqrt{x} = \varepsilon \rightarrow x = -1 \rightarrow f(\varepsilon) = \sqrt{-1} + \varepsilon = -1 + \varepsilon = 1 \checkmark$	$\left. \begin{array}{l} 1 - \sqrt{x} = -1 \rightarrow x = 1 \rightarrow f(-1) = \varepsilon \sqrt{1} = \varepsilon \checkmark \\ 1 - \sqrt{x} = \varepsilon \rightarrow x = -1 \rightarrow f(\varepsilon) = \sqrt{-1} + \varepsilon = -1 + \varepsilon = 1 \checkmark \end{array} \right\} 1 + \varepsilon \checkmark$	ε
$x + \sqrt{x} = 9 \rightarrow \sqrt{x} = t \rightarrow t^2 + t = 9 \rightarrow t^2 + t - 9 = 0 \rightarrow (t - 2)(t + 7) = 0 \xrightarrow{\sqrt{x} \geq 0} \sqrt{x} = 2 \rightarrow x = 4 \checkmark$ $f(x) = \varepsilon \rightarrow \varepsilon \sqrt{\varepsilon} = \varepsilon \omega + 1 \varepsilon = \varepsilon \omega \checkmark$		γ
$f(x-1) = (x-1)^r + (x-1)$ $f(1-x) = - (x-1)^r - (x-1)$	$\left. \begin{array}{l} f(x-1) = (x-1)^r + (x-1) \\ f(1-x) = - (x-1)^r - (x-1) \end{array} \right\} f(x-1) + f(1-x) = 0 \checkmark$	λ
$P_f = \varepsilon x - \varepsilon a \geq 0 \Rightarrow x \geq \frac{\varepsilon a}{\varepsilon} \rightarrow \frac{\varepsilon a}{\varepsilon} = 1 \rightarrow a = \frac{\varepsilon}{\varepsilon} \checkmark$ $P_g = b - \varepsilon x \geq 0 \Rightarrow x \leq \frac{b}{\varepsilon} \rightarrow \frac{b}{\varepsilon} = 1 \rightarrow b = \varepsilon \checkmark$ $\varepsilon \frac{\varepsilon}{\varepsilon} - \frac{\varepsilon}{\varepsilon} - (-1) = \varepsilon - \varepsilon + 1 = 1 \checkmark$	$\rightarrow x = 1 \rightarrow \gamma(k-1) - \varepsilon k = k \rightarrow \gamma k = \varepsilon k$ $\downarrow$ $k = -1 \checkmark$	q
$P_g = \varepsilon x + \varepsilon \geq 0 \rightarrow x \geq -1, P_f = m - x \geq 0 \rightarrow x \leq m \rightarrow [-1, m] \rightarrow m = \checkmark$ $f(x) = \sqrt{x - \varepsilon} + n = \varepsilon + n$ $g(x) = \sqrt{\varepsilon(x) + \varepsilon} = \sqrt{n} = \varepsilon \sqrt{\varepsilon}$	$\left. \begin{array}{l} \gamma + n - \varepsilon \sqrt{\varepsilon} = \varepsilon \sqrt{\varepsilon} \rightarrow n = \varepsilon \sqrt{\varepsilon} \checkmark \\ m + n = \varepsilon + \varepsilon \sqrt{\varepsilon} - \varepsilon \end{array} \right\}$ $\downarrow$ $\omega + \varepsilon \sqrt{\varepsilon}$	$1.$