

۲۰ آفرین!

Viana

subject :

Year : Month : Date :

مرفان حقیقی دوازدهم سر B

$$f(m) - n + 1 \geq 0 \Rightarrow$$

$$\begin{aligned} & \frac{r}{r_m + r - n + 1} \mid \frac{r}{r_m - 1 - n + 1} \geq 0 \\ & m \geq -\frac{r}{r} \quad n \geq 0 \Rightarrow (r, +\infty) \end{aligned}$$

$$I \cap II \Rightarrow \left[-\frac{r}{r}, +\infty\right) = D, \quad \left[-\frac{r}{r}, r\right]$$

$$y = \frac{r(1m^r + 1r_m^r + 1m + 1)}{(r_m + 1)^r} \Rightarrow \frac{r(r_m + 1)^r}{(r_m + 1)^r}$$

$$\Rightarrow \frac{r}{r_m + 1} = y \quad P(y) = R - \left\{-\frac{1}{r}\right\}$$

$$g(n) = f(n) \xrightarrow{n=0} f(\cdot) = r \Rightarrow g(\cdot) = r \Rightarrow \boxed{c = r}$$

$$g(n) = f(n) \xrightarrow{n=1} g(1) = r \Rightarrow f(1) = r \Rightarrow \frac{a+r}{1+b} = r$$

$$\Rightarrow r + rb = a + r \Rightarrow a = rb + 1 \Rightarrow rb = r \Rightarrow b = \frac{1}{r} \Rightarrow \boxed{b+c = \frac{5}{r}}$$

$$\begin{aligned} & g(-1) = f(-1) \Rightarrow g(-1) = 1 \Rightarrow f(-1) = 1 \Rightarrow \frac{-a+r}{-1+b} = 1 \\ & -1+b = -a+r \end{aligned}$$

$$\frac{(n+1)(n-1)}{n^r + an + b} = \frac{n+1}{n-c} \Rightarrow \frac{(n+1)(n-1)}{(n-1)(n-c)} = \frac{n+1}{n-c}$$

چون در دامنه $g(n)$ عدد 1 تعریف نشده است پس در $f(n)$ هم باید عدد 1

$$g(n) = \frac{n^r - 1}{(n-1)^r} \Rightarrow \boxed{a = -1} \quad \boxed{c = 1} \quad \boxed{b = 1} \quad \Leftarrow \text{تعریف نشده باشد}$$

$$a + b + c \Rightarrow -1 + 1 + 1 = 1 \checkmark$$

$$f(n+1) \Rightarrow (n-1)^r (n) \Rightarrow (n^r - rn + r)(n) \Rightarrow$$

$$n^r - rn^r + rn$$

$$f(1-n) \Rightarrow (-n-1)^r (-n) \Rightarrow (n^r + rn + r)(-n)$$

$$\Rightarrow -n^r - rn^r - rn$$

$$f(n+1) + f(1-n) \Rightarrow (n^r - rn^r + rn) + (-n^r - rn^r - rn)$$

$$g(n) = -1n^r \checkmark$$

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$$1 - r_n = -1 \Rightarrow n = 1 \Rightarrow f(-1) = f$$

$$1 - r_n = r \Rightarrow n = -1 \Rightarrow f(r) = 1$$

$$f(-1) + f(r) = 0$$

$$n + \sqrt{n} = 4 \Rightarrow n = 4$$

$$f(4) = (4)^r + r(4) = 4 \wedge$$

$$f(n-1) = (n-1)^r + (n+1)$$

$$f(1-n) = (1-n)^r + (1-n) \Rightarrow -(n-1)^r - (n-1)$$

$$\Rightarrow f(n-1) + f(1-n) = (n-1)^r + (n-1) - (n-1)^r - (n-1)$$

$$\Rightarrow f(n-1) + f(1-n) = 0$$

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$$D_f \cap D_g \Rightarrow \{1, k\}$$

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$$r_n - r_a \geq 0 \Rightarrow n \geq \frac{r_a}{r}$$

$$b - r_m \geq 0 \Rightarrow n \leq \frac{b}{r}$$

$$\frac{r_a}{r} - \frac{b}{r} = 1 \Rightarrow a = r, b = r$$

$$r f(1) - g(1) = k \Rightarrow f(1) = \sqrt{r(1) - r\left(\frac{r}{r}\right)} + k - 1 = \sqrt{r - r}$$

$$g(1) = \sqrt{r - r f(1)} + r k = \sqrt{0} + r k = r k$$

$$r(k-1) - r k = k \Rightarrow k = -1$$

$$\frac{r_a}{r} - \frac{b}{r} - k = r$$

$$D_g = [-1, +\infty), \quad D_f = (-\infty, m]$$

(2) (1.)

$$D_f \cap D_g = [-1, m] \Rightarrow m = r$$

$$f(r) = \sqrt{r - r} + n = \sqrt{0} + n = r + n$$

$$g(r) = \sqrt{r f(r) + r} = \sqrt{r} = r \sqrt{r}$$

$$(f - g)(r) = r \sqrt{r} \Rightarrow (r + n) - r \sqrt{r} = r \sqrt{r} \Rightarrow n = r \sqrt{r} - r$$

$$m + n = r + r \sqrt{r} - r = r \sqrt{r}$$