

A possible

ممكن

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فرام فرام

(1)

(2)

$$f(a) = \begin{cases} ra-1 & ; a \geq d \\ ra+c & ; a < d \end{cases}$$

$$y = \sqrt{f(a)-a+1} \geq 0 \rightarrow \begin{aligned} ra-1-a+1 &\rightarrow a \geq 0 \\ ra+c-a+1 &\rightarrow a \geq 0 - \frac{c}{r} \end{aligned}$$

$$\rightarrow \left. \begin{aligned} a \geq d \\ -\frac{c}{r} \leq a < d \end{aligned} \right\} \rightarrow D_F = \left[-\frac{c}{r}, +\infty\right) \checkmark$$

$$\frac{r(1a^r + 1ra^r + 9a+1)}{(ra+1)^r} = \frac{r(1a+1)^r}{(ra+1)^r} = \frac{r}{ra+1} \checkmark$$

(2) (2)

$$\rightarrow D_F = \mathbb{R} - \left\{-\frac{1}{r}\right\} \checkmark$$

$$y = a+c \rightarrow D_y = \mathbb{R}$$

(2) (3)

$$f = \begin{cases} \frac{aa+r}{a+b} & ; a = \pm 1 \\ \frac{a^r + ra^r - a - r}{a^r - 1} & ; a \neq \pm 1 \end{cases} \rightarrow D_F = \mathbb{R} \rightarrow a+c = \frac{a^r(a+r) - (a+r)}{a^r - 1}$$

$$\rightarrow a+c = a+r \rightarrow \boxed{c = r} \checkmark$$

$$a = 1 \rightarrow \frac{a+r}{b+1} = c \rightarrow a+r = b+c$$

$$a = -1 \rightarrow \frac{-a+r}{b-1} = 1 \rightarrow -a+r = b-1$$

$$\left. \begin{aligned} b &= r \\ b &= 0/d \\ a &= r, d \end{aligned} \right\}$$

$$\rightarrow a+b+c = \boxed{d} \checkmark$$

$$\frac{a^r-1}{a^r+aa+b} = \frac{a^r-1}{(a-c)(a-1)} \rightarrow a^r+aa+b = (a-c)^r = a^r-raa+rc^r \checkmark$$

(2)

$$= a^r - (c+1)a + c \rightarrow a = -rc, b = c \rightarrow a+b+c$$

$$= -rc + c + c = \boxed{0} \checkmark$$

$$f(x) = f(x+1) + f(1-x) \quad f(x) = (x-r)^r (x-1)$$

$$(x-r)^r (x) + (-x-r)^r (-x) \rightarrow x [(x-r)^r - (x+r)^r]$$

$$= x(-1 \cdot x) = \boxed{-1x^r}$$

$$f(1-x) = \begin{cases} \sqrt{x} + r & x \leq 0 \\ +\sqrt{x} & x > 0 \end{cases} \rightarrow \left(\begin{matrix} 1-r & 1 \\ f(-1) & f(r) \end{matrix} \right) \rightarrow \begin{matrix} 1-r & r \\ f(-1) & f(r) \end{matrix} \rightarrow \begin{matrix} 1-r & r \\ f(-1) & f(r) \end{matrix}$$

$$f(x+\sqrt{x}) = x^r + r \rightarrow f(x) = x^r + 1 \rightarrow \boxed{r \neq 1}$$

$$f(x) = x^r + x = x(x^r + 1)$$

$$f(x-1) + f(1-x) = (x-1)[(x-1)^r + 1] + (1-x)[(1-x)^r + 1]$$

$$\rightarrow (x-1)[(x-1)^r + 1 - (x-1)^r - 1] = \boxed{0}$$

$$f(x) = \sqrt{x-a} + k-1 \rightarrow f(1) = a-1$$

$$g(x) = \sqrt{b-fx} + rk \rightarrow g(1) = rx$$

$$rf(1) = g(1) \rightarrow rx - r \cdot rx = x$$

$$\rightarrow rx - rx = 0 \rightarrow x = 0$$

$$rf - g = \{1, k\} \rightarrow D_f \cap D_g = \{1\}$$

$$(-\infty, \frac{b}{r}) \rightarrow D_f = [\frac{ra}{r}, +\infty)$$

$$\rightarrow \frac{ra}{r} = \frac{b}{r} = 1$$

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$$f(x) = \sqrt{m-x} + n \quad D_{f \cap g} = [-1, V] \rightarrow D_f \cap D_g$$

$$g(x) = \sqrt{rx+r} \rightarrow D_g = [-1, +\infty)$$

$$f(r) - g(r) = 4\sqrt{r} \quad D_f = [-\infty, m] \rightarrow m = V$$

$$r+n = (r\sqrt{r}) = 4\sqrt{r} \rightarrow r+n = 4\sqrt{r} \rightarrow n = 4\sqrt{r} - r$$

$$\rightarrow n+m = 4\sqrt{r} - r + V$$