

$$y = \sqrt{f(n) - n + 1}$$

$$f(n) = \begin{cases} r_{n-1} & [n] \geq \omega \leq n \\ \varepsilon_{n+r} & [n] \leq \omega \leq n \end{cases}$$

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$$n < \omega \rightarrow \varepsilon_{n+r} - n + 1 = r_{n-1} + \varepsilon \rightarrow n \geq -\frac{\varepsilon}{r} \rightarrow -\frac{\varepsilon}{r} \leq n < \omega$$

$$n \geq \omega \rightarrow r_{n-1} - n + 1 = n \geq 0 \rightarrow n \geq \omega$$

$$\Rightarrow D_f = \left[-\frac{\varepsilon}{r}, +\infty\right)$$

$$y = \frac{r\varepsilon n^r + r^2 n^r + n n + r}{(\varepsilon n^r + \varepsilon n + 1)^r} = \frac{r(1n^r + 1r n^r + 4n + 1)}{(r_{n+1})^\varepsilon} = \frac{r(r_{n+1})^r}{(r_{n+1})^\varepsilon} = \frac{r}{r_{n+1}^{1-\frac{1}{r}}}$$

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$$D_f = \mathbb{R} - \left\{-\frac{1}{r}\right\}$$

$$f(n) = \begin{cases} \frac{n^r(n+r) - (n+r)}{n^r - 1} & n \neq \pm 1 \\ \frac{a+r}{a+b} & n = \pm 1 \end{cases} \rightarrow \frac{(n+r)(n^r-1)}{n^r-1} = n+r$$

$$b+c = ? \quad r + \frac{1}{r} = r_{1/2}$$

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$$\frac{a+r}{a+b} = \mu$$

$$\frac{a+r}{b+1} = \mu$$

$$rb+r = a+r$$

$$rb = a - 1$$

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

$$-a+r = b-1$$

$$r = b+a$$

$$\Rightarrow C = r$$

$$g(n) = n+r \quad \begin{matrix} n=1 \rightarrow \mu \\ n=-1 \rightarrow 1 \end{matrix}$$

$$rb-a = -1$$

$$a+b = r$$

$$rb = r$$

$$b = \frac{r}{r}$$

$$a = \frac{a}{r}$$

$$f(n) = \frac{n+1}{n-c} = \frac{n^r-1}{n^r+a+b} \quad (n+1)(n-1)$$

$$R = \{1\}$$

$$D = \mathbb{R} - \{1, c\}$$

$$n^r+a+b = (n-1)^r = n^r - r_{n+1}$$

$$a = -r \quad b = 1 \quad c = +1$$

$$a+b+c = -r+1+1 = 2$$

$$C=1 \quad c = \dots$$

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

$$(n-r)^r(n) + (-n-r)^r(-n)$$

$$(n^r - \varepsilon_{n+1} + \varepsilon) + (n^r + \varepsilon_{n+1} + \varepsilon)(-n)$$

$$= n^r - \varepsilon_{n+1} + \varepsilon - n^r - \varepsilon_{n+1} - \varepsilon = -2\varepsilon_{n+1}$$

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$$f(1-n) = \begin{cases} \sqrt{n+2} & n \geq 0 \\ \varepsilon \sqrt{n} & n < 0 \end{cases}$$

$$f(-1) + f(1) = ? = 2+1 = 3$$

(۲) -۵

$$1-rn = -1$$

$$-rn = -r$$

$$n = 1$$

$$1-rn = r$$

$$-rn = r$$

$$n = -1$$

$$\varepsilon \sqrt{1}$$

$$\varepsilon$$

$$\sqrt{1+r}$$

$$1$$

$$P(n+\sqrt{n}) = a^{\frac{1}{2}} + \sqrt{n} \quad P(a)$$

$$n+\sqrt{n} = 9 \rightarrow n+\sqrt{n}-4 = \dots \rightarrow a^{\frac{1}{2}} + \sqrt{n} \xrightarrow{n=9} \frac{1}{2} + \sqrt{9} = \frac{1}{2} + 3 = \frac{7}{2} = \frac{14}{4}$$

$$\frac{(\sqrt{n}+r)(\sqrt{n}-r)}{r}$$

$$n=9$$

(r) - 7

$$P(n) = a^{\frac{1}{2}} + n$$

$$P(n-1) + P(1-n) = ?$$

$$(n-1)^{\frac{1}{2}} + (n-1) + (1-n)^{\frac{1}{2}} + (1-n) = (n-1)^{\frac{1}{2}} - (n-1)^{\frac{1}{2}} = 0$$

(r) - 1

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

$$g(n) = \sqrt{b - \frac{1}{2}n} + \sqrt{k}$$

$$f \circ g = f(1, k) \quad \frac{1}{2}a - \frac{1}{2}b - k = ?$$

$$\frac{1}{2}n - \frac{1}{2}a$$

$$n > \frac{1}{2}a$$

$$b > \frac{1}{2}n$$

$$\frac{b}{\frac{1}{2}} > n$$

$$\Rightarrow \frac{1}{2}a - \frac{1}{2}b = 1 \rightarrow b = \frac{1}{2}a$$

$$a = \frac{1}{2}b$$

$$\frac{1}{2} \times \frac{1}{2} - \frac{1}{2} + 1 = \frac{1}{4} - \frac{1}{2} + 1 = \frac{3}{4}$$

$$f(\sqrt{\frac{1}{2}a - \frac{1}{2}b + k - 1}) - (\sqrt{\frac{1}{2}a - \frac{1}{2}b} + \sqrt{k}) = k$$

$$\sqrt{k} - \sqrt{k} = k \rightarrow -\sqrt{k} = k \rightarrow k = -1$$

(r) - 9

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

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

$$D_{fg} = [-1, 1]$$

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

$$m > n$$

$$\rightarrow m = 1$$

$$r > -1$$

$$n > -1$$

$$m+n = ?$$

$$1 + \sqrt{1-r} - r = 1 + \sqrt{1-r} - r$$

(r) - 10

$$\sqrt{\frac{1}{2}a - \frac{1}{2}b} + n - \sqrt{\frac{1}{2}a - \frac{1}{2}b} = n = \sqrt{1-r}$$