

$$[x] \geq 4 \rightarrow \sqrt{x} = y \quad / \quad [x] \leq 4 \rightarrow x \leq 16 \quad \checkmark$$

$$\xrightarrow{U} D_y = [-\frac{1}{2}, +\infty)$$

$$\frac{r(1n^r + 12n^r + 4n+1)}{(r+1)^r} = \frac{r(r+1)^r}{(r+1)^r} = \frac{r}{r+1} \rightarrow \neq 0$$

$$\rightarrow D_f = (-\infty; \frac{1}{r}) \cup (\frac{1}{r}; +\infty)$$

$$\left. \begin{array}{l} g(u) = f(u) \rightarrow r = \frac{a+r}{b+1} \\ g(-1) = f(u) \rightarrow 1 = \frac{r-a}{b+1} \end{array} \right\} \begin{array}{l} r_{b+r} = a+r \\ b-1 \leq r-a \end{array} \rightarrow b = \frac{1}{r}$$

$$f(0) = r \rightarrow g(0) = r \rightarrow c = r$$

$$\frac{(n+1)(n-1)}{n^r + an + b} = \frac{n+1}{n-c} \rightarrow (n-1)(n-c) = n^r + an + b \rightarrow \underline{\underline{b=c}} \quad / \quad \underline{\underline{a \leq -c-1}}$$

$$\rightarrow D_f = \mathbb{R} - \{c\} \rightarrow [b; c] \subseteq \mathbb{R} \rightarrow n^r + an + b \leq (n-1)^r$$

$$\rightarrow \underline{\underline{c \leq 1}} \rightarrow 1 - 1 + 1 - 1 \leq 0$$

$$\left. \begin{array}{l} f(1-n) = (-n-1)^r(-n) = -n^r - rn^r - rn \\ f(1+n) = (n-1)^r(n) = n^r - rn^r + rn \end{array} \right\} f(1-n) + f(1+n) = g(n) = -1n^r$$

$$\left. \begin{array}{l} 1 - \sqrt{x} = -1 \leadsto \sqrt{x} = 1 \leadsto f(-1) = \sqrt{x} \\ 1 - \sqrt{x} = 1 \leadsto \sqrt{x} = 0 \leadsto f(0) = 1 \end{array} \right\} \rightarrow f(-1) + f(1) = \sqrt{x} + 1 = 0$$

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$$x + \sqrt{x} = 4 \leadsto \sqrt{x} = 4 - x$$

$$\leadsto f(4) = \sqrt{x} + 1 = 1 + 4 = 5$$

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$$\begin{array}{l} f(x+1) + f(1-x) = f(t) + f(-t) \\ \quad \downarrow \quad \quad \downarrow \\ t(t+1) + (-t(t+1)) = 0 \end{array}$$

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$$\left. \begin{array}{l} b - \sqrt{x} \geq 0 \rightarrow x \leq \frac{b^2}{4} \\ \sqrt{x} - a \geq 0 \rightarrow x \geq a^2 \end{array} \right\} \frac{b^2}{4} \leq x \leq \frac{b^2}{4}$$

$$\begin{array}{l} \frac{b^2}{4} \leq 1 \rightarrow a = \frac{b^2}{4} / \frac{b^2}{4} \leq 1 \rightarrow b = 2 \leadsto f(1) - g(1) = k \rightarrow k = 1 - 2k \\ \rightarrow k = -1 \\ \rightarrow a - b - k = 3 \end{array}$$

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$$\left. \begin{array}{l} \sqrt{x} + \sqrt{y} = 1 \rightarrow \sqrt{x} = 1 - \sqrt{y} \\ m - \sqrt{x} = 0 \rightarrow \sqrt{x} = m \end{array} \right\} \rightarrow D_{f \circ g}[-1, 1] \rightarrow m = 1$$

$$f(x) - g(x) = 4\sqrt{x} \rightarrow 1 + m - 4\sqrt{x} = 4\sqrt{x} \leadsto m = 8\sqrt{x} - 1$$

$$\left. \begin{array}{l} \end{array} \right\} m + n = 0 + 1\sqrt{x}$$

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