

$$\left. \begin{array}{l} n \in Df(n) \Rightarrow n \geq 2 \rightarrow \text{چون اگر } n < 2 \text{ باشد، } 1 < n < 2 \text{ نمی باشد} \\ f(n) \in Dg(n) \Rightarrow f(n) = 0 \end{array} \right\} \Rightarrow n = 2$$

$$g(n) = \sqrt{-(n-2)^2} \Rightarrow Dg = \{0\}$$

$$\begin{aligned} 2n^2 - 5n + 1 &= f(n^2 - 2n + 3) \\ 2n^2 - 5n + 1 &= 0 \quad (n-1)(n-2) = 0 \quad n = 1 \end{aligned}$$

$$f + f = 61$$

$$\left. \begin{array}{l} g \circ f(x) = \frac{1}{f} x^2 + 11 \\ f(n) = 2n \end{array} \right\} \Rightarrow g(n) = \frac{1}{f} n^2 + 11$$

$$\frac{1}{f} (n-1)^2 + 11 = \text{...} \quad \min = 0 \Rightarrow \min g = 11$$

$$\begin{aligned} f \circ g &= 2n^2 - 5n - 1 \xrightarrow{+5} 2n^2 - 5n + 4 \xrightarrow{+1} 2n^2 - 5n + 5 \Rightarrow g(n) = (n-1)^2 \\ g \circ f &= (2n-5)^2 + (2n^2 - 5n + 1) \end{aligned}$$

$$\left. \begin{array}{l} f - g = -n + 6 \\ g = 2f - 1 \end{array} \right\} \Rightarrow \frac{f}{2} = -n - 2 \Rightarrow f(n) = 2n + f$$

$$g(n) = 2n + 9 - 1 = 2n + 8$$

$$f \circ g = 2(2n-1) + 5 = 4n + 2 \Rightarrow a = -\frac{1}{2}$$

$$\log_q^n \geq q^{\log_r^n} \rightarrow n \log_q^n \geq n^{\log_q^n} \Rightarrow r \geq n \rightarrow n^r - rn \leq 0$$

$$n(n-r) \leq 0$$

$$\frac{q}{+} \frac{r}{-} \frac{1}{+}$$

$$0 \leq n \leq r$$

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$$n - \frac{r}{n} = t$$

$$f(t) = \left(n - \frac{r}{n} + \frac{t}{n} \right) + \left(n - \frac{r}{n} \right) \Rightarrow f(t) = t^r + t$$

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

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$$f \circ g = \log_r^{n-n^r} \quad D_{f \circ g} : n - n^r > 0 \quad \frac{1}{-} \frac{1}{+} \frac{1}{-}$$

$$R_{f \circ g} : \max_{n-n^r} = 1 \Rightarrow \max f \circ g = 1 \Rightarrow R_{f \circ g} = (-\infty, 1]$$

$$E. (R_{f \circ g} \cap D_{f \circ g} : (0, 1])$$

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$$h(g(n)) = n^r - rn^r + \omega n - r \quad n^r - rn^r + \omega n - r = 1 - n^r$$

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

$$n^r + \omega n - r = 0$$

مشتق: $rn^{r-1} + \omega \rightarrow 0$ $\Rightarrow$ تابع درجه ۲ است $\Rightarrow$ اریتم دارد

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$$g(r) = 1 \rightarrow g\left(\frac{r-f}{r}\right) = 1$$

$$f(n) = \frac{n^r - f}{n}$$

$$r = \frac{n^r - f}{n}$$

$$a = -1$$

$$a = 0$$

$$an^r + rn \xrightarrow{n=-1} -a-r=1$$

$$an^r + rn \xrightarrow{n=+1} 9fa+1=1$$

$$n^r - f = rn \quad n^r - rn - f = 0$$

$$(n-f)(n+1)$$

$$n \leq -1$$

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