

(۲)

$$f(n), \begin{cases} r_{k-1} - \varepsilon < [n] \leq r_k \\ r_{k+1} - \varepsilon < [n] \leq r_{k+2} \end{cases} \quad g(n) = \sqrt{f(n) - k + 1}$$

$$1) k \geq 5 \rightarrow f(n), r_{k-1} \rightarrow r_{k-1} - k + 1 \geq 0 \rightarrow k \geq 0 \rightarrow [5, +\infty)$$

$$2) k < 5 \rightarrow f(n) \in \varepsilon n + r \rightarrow r_{k+1} - k + 1 \geq 0 \rightarrow r_{k+1} + \varepsilon \geq 0 \rightarrow r_{k+1} \geq -\varepsilon \rightarrow k \geq -\frac{\varepsilon}{r} [-\frac{\varepsilon}{r}, 5)$$

$$1) \text{ دانه} \rightarrow \text{نقیص منقسم شود} \rightarrow r_{k^r} + \varepsilon n + 1 \geq 0 \rightarrow k^r + \varepsilon n + \varepsilon \geq 0 \rightarrow r_{k+1} \geq r \rightarrow k \geq -\frac{1}{r}$$

$$2) \text{ دانه} \rightarrow R = \left\{ \frac{1}{r} \right\} \rightarrow g(n) = \frac{r(\lambda k^r + 12k^r + q_{k+1})}{(r_{k^r} + \varepsilon k + 1)} \rightarrow k = -\frac{1}{r} \rightarrow \text{نقیص منقسم شود} \rightarrow \text{نقیص منقسم شود} \rightarrow \text{نقیص منقسم شود}$$

$$f(n), \begin{cases} \frac{k^r + r_{k^r} - k - r}{k^r - 1} & k \neq \pm 1 \\ \frac{a_{k+r}}{k+b} & k = \pm 1 \end{cases} \quad g(n), k+c \rightarrow \frac{k^r + r_{k^r} - k - r}{k^r - 1} \rightarrow \frac{(k-1)(k+1)(u+r)}{(k-1)(k+1)}$$

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

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

$$f(n), \frac{k+1}{k-c}, g(n), \frac{(k+1)(n-1)}{k^r + a n + b} \rightarrow k^r + a n + b, k^r + k(-1-c) + c \rightarrow -1-c, a$$

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

$$\frac{(k+1)(n-1)}{(k-1)(n-1)} \rightarrow c=1 \rightarrow a=-r \quad b=1 \rightarrow a+b+c=0$$

$$g(u) = f(u+1) + f(1-u) \rightarrow f(u+1) = (u+1-r)^r (u+1) = (u-r)^r (u) \quad (5)$$

$$f(1-u) = (1-u-r)^r (1-u-1) = (-u-r)^r (-u) \rightarrow g(u) =$$

$$g(u) = \cancel{u^r} + \cancel{\varepsilon u^r} + \cancel{\varepsilon u} - \cancel{u^r} - \cancel{\varepsilon u^r} - \cancel{\varepsilon u} = g(u) = \lambda u^r \quad (2)$$

$$f(-1) + f(r) = ? \rightarrow 1-r = -1 \rightarrow r = 2 \rightarrow u = 1 \rightarrow \boxed{1} \quad (2)$$

$$\xrightarrow{k=r} 1-r = r \rightarrow r = -r \rightarrow u = -1 \rightarrow \boxed{-1} \quad (2)$$

$$f(u+\sqrt{u}) = u\varepsilon - r u \rightarrow u + \sqrt{u} = \varepsilon \rightarrow u \leq \varepsilon \rightarrow r \Delta \gamma + 11 \leq r \Delta \gamma \quad (2)$$

$$f(u) = u^r + u \rightarrow (u-1)^r + (u-1) + (1-u)^r + (1-u) \rightarrow$$

$$\cancel{u^r} - 1 + \cancel{u^r} - \cancel{u^r} + u - 1 + 1 - \cancel{u^r} - \cancel{u^r} + \cancel{u^r} + 1 - u = 0 \quad (2)$$

$$\xrightarrow{u=1} r\sqrt{\varepsilon - r a} + k - r - \sqrt{b - r} + r k \leq k \rightarrow r\sqrt{\varepsilon - r a} - r - \sqrt{b - r} = k = 0$$

$$\xrightarrow{r \neq r} \sqrt{r - r a} - 1 - \frac{\sqrt{b - r}}{r} - k = 0 \rightarrow r a - \frac{b}{r} - k = 0$$

معنی بعد و بخون

$$f(u) = \sqrt{m-u} + u \quad g(u) = \sqrt{u+r} \rightarrow D_g(u+r) = 0 \rightarrow u = -1 \rightarrow D_f(m-u) = 0 \rightarrow u \leq m \quad (1)$$

$$\boxed{m \leq \sqrt{r}} \rightarrow f(r) = g(r) = \sqrt{r} \rightarrow g(r) = \sqrt{1} = \sqrt{r} \rightarrow f(r) = \lambda \sqrt{r} \quad (2)$$

$$f(r) = \sqrt{\frac{r-p}{r}} + n = \frac{1}{\sqrt{r}} \rightarrow \boxed{n \leq \frac{1}{\sqrt{r}} - 1} \quad m+n \leq \frac{1}{\sqrt{r}} - 1 + \sqrt{r} = \Delta + \frac{1}{\sqrt{r}}$$

$$\frac{\cancel{\lambda k^u} + 12k^u + 4u+1}{\cancel{-\lambda k^u} + \lambda k^u + 2u} \cdot \frac{2k^u + \varepsilon_{u+1}}{2u+1}$$

$$\rightarrow y = \frac{2(2u+1)(\cancel{2k^u} + \varepsilon_{u+1})}{(\cancel{2k^u} + \varepsilon_{u+1})(\underbrace{2k^u + \varepsilon_{u+1}}_{(2u+1) \cdot 2})}$$

$$\frac{2k^u + \varepsilon_{u+1}}{2u^2 + \varepsilon_{u+1}}$$

$$y = \frac{2}{2u+1} \quad \checkmark$$

۹. اشتراک دامنه f و g فقط $u=1$ است یعنی

$$D_f = \left[\frac{a}{f}, +\infty \right) \quad D_g = (-\infty, \frac{b}{f}] \quad \xrightarrow{\Delta} \{1\}$$

$$\frac{a}{f} = \frac{b}{f} = 1 \rightarrow a = \frac{f}{2} \quad b = f$$

$$2f(1) - g(1) = K \rightarrow 2K - 2 - 2K = K \rightarrow K = -1$$

$$\frac{a}{f} - \frac{b}{f} = K = \boxed{2}$$