

$$\begin{aligned} \gamma f(a) - \gamma f(-a) &= \epsilon a^r - a \\ \gamma f(-a) - \gamma f(a) &= \epsilon a^r + a \end{aligned} \quad \begin{aligned} \gamma f(a) - \gamma f(-a) &= 11a^r - \gamma a \\ \gamma f(-a) - \gamma f(a) &= 1\gamma a^r + \gamma a \end{aligned}$$

$$-\Delta F(a) = \gamma \cdot a^r - a \Rightarrow \underline{f(a) = -\epsilon a^r - \frac{1}{\Delta}}$$

$$(a+\gamma)f(\cdot) - \gamma a f(a+\gamma) = \epsilon a^r - ma + \gamma m - 1 \quad f(\cdot) = ?$$

$$\hookrightarrow \lambda = 0 \quad (\gamma f(\cdot) + \gamma m - 1) \alpha^r$$

$$\lambda = -\gamma \quad + \gamma f(\cdot) = 1\gamma + \gamma m + \gamma m - 1$$

$$\Rightarrow 9m - \gamma = 1\gamma + \gamma m$$

$$\epsilon m = 11 \Rightarrow \frac{11}{\epsilon} = m$$

$$\underline{\frac{11}{\gamma}}$$

$$\frac{\gamma}{\gamma} m - \frac{1}{\gamma} = f(\cdot)$$

$$\frac{\gamma}{\gamma} \alpha \frac{11}{\epsilon} = \frac{\Delta \epsilon}{\Delta} - \frac{\epsilon}{\Delta} = \frac{\Delta}{\Delta}$$

$$\underline{\frac{\gamma \Delta}{\epsilon}} \quad \leftarrow$$

$$f(a) = am + b$$

$$f(-1) = ?$$

$$f(a) + f\left(\frac{1}{a}\right) = \frac{\gamma a^r - 1\gamma a + \gamma}{a}$$

$$-a + b + (-a) + b = \frac{\gamma + 1\gamma + \gamma}{-1} = -11 \Rightarrow \gamma f(-1) = \underline{-9}$$

$$y = \sqrt{\frac{a-1}{a+1} - \frac{a}{a-1}} \geq 0 \Rightarrow \frac{(a-1)^2 - a^2}{a(a-1)} \geq 0 \Rightarrow a^2 + 1 - 2a - a^2 \geq 0 \Rightarrow -2a + 1 \geq 0 \Rightarrow a \leq \frac{1}{2}$$

$$y = \frac{\frac{1}{a+1} - \frac{y}{a}}{\frac{y}{a-1} + \frac{1}{a+y}} \geq 0 \quad -1, 0 \Rightarrow \frac{y(a+y) + a-1}{(a-1)(a+y)} \geq 0 \Rightarrow \begin{cases} a+y \geq 0 \\ a-1 \geq 0 \end{cases} \Rightarrow a \geq 1$$

$$y = \sqrt{\left(\frac{1}{a}\right)^2 - 9} \geq 0 \Rightarrow \frac{1}{a^2} - 9 \geq 0 \Rightarrow \frac{1 - 9a^2}{a^2} \geq 0 \Rightarrow 1 - 9a^2 \geq 0 \Rightarrow a^2 \leq \frac{1}{9} \Rightarrow a \leq \frac{1}{3}$$

$$\sqrt{a-1} + \sqrt{a+1} = 2 \Rightarrow (\sqrt{a-1} + 2)^2 = (\sqrt{a+1})^2 \Rightarrow \sqrt{a-1} = 9 - \sqrt{a+1} \Rightarrow \sqrt{a-1} = 9 - \sqrt{a+1}$$

$$\sqrt{a-1} + 1 - \sqrt{a+1} = 0 \Rightarrow a \geq 1 \quad \hookrightarrow \geq 0 \Rightarrow \sqrt{a-1} \leq 2 \Rightarrow a-1 \leq 4 \Rightarrow a \leq 5 \quad D_f[1, 5]$$

$$y = \log_r(a^2 - a - 2) \geq 0 \quad (a+1)(a-2) \quad \frac{-1}{a} \geq 0 \Rightarrow a \leq 0 \quad (-\infty, -1) \cup (2, +\infty)$$

$$\sqrt{a^2 - 1} \geq 1 \Rightarrow a^2 - 1 \geq 1 \Rightarrow a^2 \geq 2 \Rightarrow a \geq \sqrt{2} \quad \Rightarrow (-\infty, -1) \cup (1, +\infty)$$

$$y = \sqrt{a^2 - a - n^2} \quad D_f = [-2, b] \quad a+b \Rightarrow f(-2) = \sqrt{4 - 2a - n^2} \geq 0 \Rightarrow -2a \geq n^2 \Rightarrow a \leq -\frac{n^2}{2}$$

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

$$f(a) = \begin{cases} (a+1)(a-2) & a \geq 1 \\ a^2 + 2a & a < 1 \end{cases} \quad y f(a) = f(-y) + a \quad a = ?$$

$$f(a) = \sqrt{a} + \frac{1}{\sqrt{a}} + 2 \quad f(y - \sqrt{y}) + f(y + \sqrt{y}) \Rightarrow \text{مطلوب}$$

$$f(b) + f\left(\frac{1}{b}\right) \Rightarrow y\left(\sqrt{b} + \frac{1}{\sqrt{b}}\right) + f$$

$$y(\sqrt{y+\sqrt{y}} + \sqrt{y-\sqrt{y}}) + f$$

$$y\sqrt{y} + f$$

$$\Rightarrow \delta^2 \Rightarrow (y - \sqrt{y}) + (y + \sqrt{y}) + y\sqrt{(y+\sqrt{y})(y-\sqrt{y})}$$

$$\hookrightarrow \Rightarrow \pm \sqrt{y} \Rightarrow \sqrt{y} + \frac{1}{\sqrt{y}} \Rightarrow \frac{1}{\sqrt{y}}$$