

$$P((a+1)(7)) = 3a - \varepsilon + a$$

$$12a + 12 = 4a - \varepsilon$$

$$10a = -12, \quad \boxed{a = -1.2}$$

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$$\sqrt{2-\sqrt{3}} + \frac{1}{\sqrt{2-\sqrt{3}}} + \sqrt{2+\sqrt{3}} + \frac{1}{\sqrt{2+\sqrt{3}}} + \sqrt{2}$$

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$$\sqrt{2-\sqrt{3}}(\sqrt{2-\sqrt{3}})(\sqrt{2+\sqrt{3}}) + \sqrt{2+\sqrt{3}}(\sqrt{2-\sqrt{3}})(\sqrt{2+\sqrt{3}}) + \sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}} + \sqrt{2}$$

$$2\sqrt{2-\sqrt{3}} + 2\sqrt{2+\sqrt{3}} + 2 \Rightarrow 2(\sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}}) + 2 = 2\sqrt{4+2} = 2\sqrt{6} \Rightarrow a = \sqrt{6}$$

$$2 \times 2f(x) - 3f(-x) = \varepsilon x^2 - x \Rightarrow 4f(x) - 3f(-x) = \varepsilon x^2 - x$$

$$3 \times 2f(-x) - 3f(x) = \varepsilon x^2 + x \Rightarrow 6f(-x) - 3f(x) = \varepsilon x^2 + x$$

$$-5f(x) = 20x^2 + 2x \Rightarrow f(x) = -4x^2 - \frac{x}{5}$$

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$$\begin{cases} f(0) = 2f(0) = 3m - 1 \\ f(-2) = 4f(0) = 12 + 2m + 3m = 12 + 5m \end{cases} \quad \begin{cases} -5 \times 2f - 3m = -1 \\ 3 \times 4f - 5m = 12 \end{cases} \quad \begin{cases} -10f + 15m = -1 \\ 12f - 15m = 12 \end{cases}$$

$$f(0) = \frac{12}{18} = \frac{2}{3}$$

$$12f(0) = 12 \times \frac{2}{3} = 8$$

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$$f(-1) \Rightarrow f(-1) + f(-1) = \frac{3+12+3}{-1} \Rightarrow 2f(-1) = -18$$

$$\boxed{f(-1) = -9}$$

پس: رای ضایع

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$$\begin{aligned} 1) \quad D_f &= 1-x \geq 0 \Rightarrow \boxed{x \leq 1} \quad (-\infty, 1] \\ D_g &= (1-x)^3 \geq 0 \Rightarrow 1-x \geq 0, \quad \boxed{x \leq 1} \quad (-\infty, 1] \end{aligned} \quad \left. \vphantom{\begin{aligned} D_f &= 1-x \geq 0 \\ D_g &= (1-x)^3 \geq 0 \end{aligned}} \right\} D_f = D_g$$

$$2) f(0) = g(0), \dots$$

$$1), 2) \Rightarrow f(x) = g(x)$$

$$\begin{aligned} 1) \quad D_f &= x \geq 0 \quad [0, \infty) \\ D_g &= x^3 \geq 0 \Rightarrow x \geq 0 \quad [0, \infty) \end{aligned} \quad \left. \vphantom{\begin{aligned} D_f &= x \geq 0 \\ D_g &= x^3 \geq 0 \end{aligned}} \right\} D_f = D_g$$

$$2) f(x) = x\sqrt{x} = g(x) = \sqrt{x^3}, \dots$$

$$1), 2) \Rightarrow f(x) = g(x)$$

$$\begin{aligned} 1) \quad D_f &= \boxed{x \geq 0} \\ D_g &= x - |x| \geq 0 \leadsto x \geq |x| \leadsto \boxed{x \geq 0} \end{aligned} \quad \left. \vphantom{\begin{aligned} D_f &= x \geq 0 \\ D_g &= x - |x| \geq 0 \end{aligned}} \right\} D_f = D_g$$

$$2) f(x) = g(x), \dots = \boxed{0}$$

$$1), 2) \Rightarrow f(x) = g(x)$$

$$D_{f \circ g} = \{1, 2, 3, 0\}$$

$$\text{الف) } \frac{x+1}{x-1} = \frac{3}{1} \dots \rightarrow (1, 3)$$

$$\text{ب) } \frac{x^3}{0} = \frac{0}{0} \dots \text{تعريف نشده}$$

$$2.) f(0) \circ g(-1) = 0 \times 1 = 0$$

$$\text{الف) } \left(\frac{x+1}{3}, \frac{x}{3} \right) \leadsto g(x) = \left\{ (1, 1), (0, 2), \left(\frac{1}{3}, 5 \right), \left(-\frac{1}{3}, 2 \right), \left(\frac{2}{3}, -1 \right) \right\}$$

$$\text{ب) } |x| = \text{مقدار مطلق} = h(x) \Rightarrow (\mp 2, 1), (0, 5), (\mp 3, -1)$$