

$$f(x) = (x-1)\sqrt{1-x} \rightarrow (-\infty, 1]$$

$$g(x) = -\sqrt{(1-x)^3} \rightarrow (-\infty, 1]$$

دو تابع برابرند

$$f(x) = x\sqrt{x} \rightarrow [0, +\infty)$$

$$g(x) = \sqrt{x^3} \rightarrow [0, +\infty)$$

$$\frac{5\sqrt{5}}{\sqrt{125}} = \sqrt{125}$$

$$f(x) = [\sqrt{x} - \lfloor \sqrt{x} \rfloor] \rightarrow [0, +\infty)$$

$$g(x) = \sqrt{x - \lfloor x \rfloor} \rightarrow [0, +\infty)$$

$$\begin{aligned} f(2) &= 0 \\ g(2) &= 0 \end{aligned}$$

$$\text{الف) } \left(\frac{f+g}{f-g} \right)(1) = \frac{1+2}{2-1} = 3$$

$$\text{ج) } f(0)g(-1) = 0$$

$$\text{ب) } \frac{f+g}{f-g}(2) = \frac{f+g}{3-3} \text{ تعریف نشود}$$

$$\text{الف) } f(3x-1) \Rightarrow \left\{ (0, 4), \left(\frac{1}{3}, 5\right), (0, 4), (1, 1), \left(\frac{4}{3}, -1\right), \left(\frac{7}{3}, 2\right) \right\}$$

$$\text{ب) } f(|x|) = \{(2, 1), (-2, 1), (0, 5), (3, -1), (-3, -1)\}$$

$$2f(\omega) = f(-2) + a \quad \hookrightarrow \quad |fa + 1f = fa - f \quad | : a = -1 \quad a = \frac{-9}{\Delta}$$

$$f(2-\sqrt{3}) + f(2+\sqrt{3}) = 9$$

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

$$(2-\sqrt{3})(2+\sqrt{3}) = 1 \quad \left(\begin{array}{l} \\ = \sqrt{6} + 2 \end{array} \right)$$

$$\text{در تمام جواب می دهند} \quad \hookrightarrow \quad f(2-\sqrt{3}) = f(2+\sqrt{3})$$

$$\hookrightarrow 2 \times (\sqrt{6} + 2)$$

$$2f(x) - 3f(-x) = 4x^2 - x$$

$$2f(x) - 3f(-x)$$

$$2f(-x) - 3f(x) = 4x^2 + x \quad \rightarrow \quad + \quad \begin{array}{l} 2f(x) - 3f(-x) \\ - 2f(-x) + 3f(x) \end{array}$$

$$\frac{-2, \Delta f(x) = 10x^2 + \frac{1}{4}x}{-2, \Delta f(x) = 10x^2 + \frac{1}{4}x} \quad \hookrightarrow \quad f(x) = -\frac{1}{2}x^2 + \frac{1}{\omega}x$$

$$x = -2$$

$$5f(0) = 14 + 2m + 3m - 1$$

$$2f(0) = 3m - 1$$

$$x = 0$$

$$9m - 2 = 2m + 12$$

$$m = 1, \Delta$$

$$\frac{f, \Delta \times 3 - 1 = 4, 2\Delta}{2}$$

$$f(x) + f\left(\frac{1}{x}\right) = -3x + \frac{3}{x} - 12$$

$$f(x) = ax + b$$

$$f\left(\frac{1}{x}\right) = \frac{a}{x} + b$$

$$\frac{a}{x} + ax + 2b = -3x + \frac{3}{x} - 12$$

$$a = -3$$

$$b = -6$$

$$f(-1) \Rightarrow 3 - 6 = -3$$