

$$f(x) = 7a + 7$$

$$f(-2) = 4a - 4$$

$$2f(x) = f(-2) + a \Rightarrow 14a + 14 = 4a - 4 + a$$

$$10a = -18 \Rightarrow a = -1.8$$

$$A = \left( \sqrt{2+\sqrt{e}} + \frac{1}{\sqrt{2+\sqrt{e}}} \right)^2 = 2+\sqrt{e} + \frac{1}{2+\sqrt{e}} \times (2+\sqrt{e}) + 2 \Rightarrow A = 6 \Rightarrow A = \pm\sqrt{5}$$

$$B = \left( \sqrt{2-\sqrt{e}} + \frac{1}{\sqrt{2-\sqrt{e}}} \right)^2 = 2-\sqrt{e} + \frac{1}{2-\sqrt{e}} \times (2-\sqrt{e}) + 2 \Rightarrow B = 6 \Rightarrow B = \pm\sqrt{5}$$

$$A+B+C+C \Rightarrow \sqrt{4} + \sqrt{4} \Rightarrow \text{جواب یابانی}$$

$$2 \times 2f(x) - 3f(-x) = 5x^2 - x \Rightarrow 4f(x) - 3f(-x) = 18x^2 - 2x$$

$$3 \times 2f(-x) - 3f(x) = 5x^2 + x \Rightarrow 3f(-x) - 9f(x) = 12x^2 + 2x$$

$$-5f(x) = 10x^2 + x$$

$$f(x) = -2x^2 - \frac{1}{5}x$$

$$\text{If } x=0 \quad 2f(0) = 3m-1 \Rightarrow \text{If } m = \frac{9}{2} \Rightarrow f(0) = \frac{2\omega}{5}$$

$$\text{If } x=-2 \quad 3f(0) = 1\omega + 2m$$

$$\frac{3m-1}{\frac{2}{5}} = \frac{1\omega + 2m}{\frac{2}{3}} \Rightarrow 9m-3 = 1\omega + 2m \Rightarrow 7m = 1\omega$$

$$\text{If } x=-1 \Rightarrow 2f(-1) = -18 \Rightarrow f(-1) = -9$$

$$20 \Rightarrow ax+b + \frac{a}{x} + b$$

$$\frac{ax^2 + 2bx + a}{x} = \frac{5x^2 - 12x + 2}{x} \Rightarrow a=3, b=-5$$

$$f(-1) = -9$$

$$(x-1)\sqrt{1-x}$$

$$D_f = 1-x \geq 0 \Rightarrow x \leq 1 \quad \checkmark$$

$$-\sqrt{(1-x)^3} \Rightarrow -\sqrt{(1-x)^2(1-x)} \Rightarrow x-1\sqrt{x-1} \quad \text{فاصله} \quad \checkmark$$

$$D_f = 1-x \geq 0 \Rightarrow x \leq 1 \quad \checkmark$$

$$f(x) = x\sqrt{x}$$

$$D_f = [0, +\infty) \quad \checkmark$$

$\Rightarrow$

در تابع باید دید باز است

$$g(x) = \sqrt{x^3} \Rightarrow |x| \sqrt{x^2} \quad \checkmark$$

$$D_f = [0, +\infty)$$

$$[\sqrt{x} - [\sqrt{x}]] \rightarrow [0 \leq t < 1] = 0$$

$$D_f = [0, +\infty)$$

$\Rightarrow$

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$$\sqrt{x - |x|}$$

$$\rightarrow R_f = 0$$

$$D_f = \begin{matrix} \rightarrow \oplus \checkmark \\ \rightarrow \ominus \checkmark \\ \rightarrow \ominus x \end{matrix} [0, +\infty)$$

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

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

$$\frac{f(1)+g(1)}{f(1)-g(1)} \Rightarrow$$

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

$$\text{ب) } \left( \frac{f+g}{f-g} \right) (2)$$

$$\frac{2+2}{2-2} = 0 \Rightarrow \text{نقص} \quad \checkmark$$

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$$\text{ج) } f(0)g(-1) \Rightarrow 0 \times 1 = 0$$

دقت کن :-

$$g(x) = f(x-1) \quad (1, 1) \quad (0, 0) \quad \left(-\frac{1}{2}, 0\right) \quad \left(-\frac{1}{2}, 2\right) \quad \left(-\frac{1}{2}, -1\right)$$

$$x-1=2 \Rightarrow x=3, \quad x-1=-1 \Rightarrow x=0, \quad x-1=0 \Rightarrow x=1, \quad x-1=-2 \Rightarrow x=-1$$

$$x-1=0 \Rightarrow x=1$$

$$|x| = 2$$

$$|x| = -1$$

$$|x| = 0$$

$$|x| = -2$$

$$|x| = 2 \quad (1, 1) \quad (0, 0)$$

$$x = \pm 2$$

$$x = 0$$

$$x = 0$$

$$x = 0$$

$$x = \pm 2$$

$$(1, 1) \quad (0, 0)$$