

نام و نام خانوادگی ... نام ... پاسنامه تشریحی تکلیف شماره ... کلاس ... دفتر ...

$$x = \omega > 1 \rightarrow 2x(a+1) \stackrel{(\omega+1)}{=} 14(a+1)$$

$$x = -2 < 1 \quad f(-2) = 3a + 2 \times (-2) = 3a - 4$$

$$14a + 14 = (3a - 4) + a \rightarrow 14a + 14 = 4a - 4 \rightarrow 10 = -18$$

$$a = \frac{9}{5}$$

$$f(2\sqrt{3}) = \sqrt{2-\sqrt{3}} + \sqrt{\frac{1}{2-\sqrt{3}}} \quad f(2\sqrt{3}) = \sqrt{2+\sqrt{3}} + \sqrt{\frac{1}{2+\sqrt{3}}}$$

$$\sqrt{2-\sqrt{3}} + \sqrt{\frac{1}{2-\sqrt{3}}} \stackrel{(\frac{2+\sqrt{3}}{2-\sqrt{3}})}{=} \sqrt{2+\sqrt{3}} + \sqrt{\frac{2+\sqrt{3}}{2-\sqrt{3}}} = 2(\sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}})$$

$$(\sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}})^2 = (2-\sqrt{3}) + (2+\sqrt{3}) + 2\sqrt{(2-\sqrt{3})(2+\sqrt{3})} \rightarrow 4 + 2\sqrt{4-3} = 6 \rightarrow \sqrt{6}$$

من به قول دوستی که بعد از این کارها در دفتر بی کتب

$$\begin{cases} 2f(a) - 3f(-a) = 4a^2 - a \\ 2f(-a) - 3f(a) = 4a^2 + a \end{cases} \xrightarrow{\text{با } a \text{ ضرب}} \begin{cases} 2f(a) - 3f(-a) = 4a^2 - a \\ -9f(a) + 4f(-a) = 12a^2 + 3a \end{cases}$$

$$-5f(a) = 10a^2 + 4a$$

$$f(a) = -2a^2 - \frac{4a}{5}$$

$$x=0 \text{ برای } n \rightarrow 2f(0) = 3m-1 \rightarrow f(0) = \frac{3m-1}{2}$$

$$x=2 \text{ برای } n \rightarrow 4f(0) = 1\omega + 0m \rightarrow f(0) = \frac{1\omega + 0m}{4}$$

$$\frac{1\omega + 0m}{4} = \frac{3m-1}{2} \rightarrow 1\omega + 0m = 2m-1 \rightarrow 2m = 1 \quad m = \frac{1}{2}$$

$$f(0) = \frac{3 \times \frac{1}{2} - 1}{2} = \left(\frac{1.5}{2} \right)$$

نمودار خطی $f(a) = a\alpha + b$

$$f(a) + f\left(\frac{1}{a}\right) = \frac{3a^2 - 12a + 1}{a} \rightarrow 3a - 12 + \frac{1}{a}$$

$$a\alpha + b + \frac{a}{\alpha} + b = a\alpha + \frac{a}{\alpha} + 2b \Rightarrow 3\alpha + \frac{1}{\alpha} - 12$$

$$2b = -12 \rightarrow b = -6 \quad a = 3$$

$$f(a) = 3a - 6 \rightarrow f(-1) = -3 - 6 = -9$$

$$f \text{ دایره } \rightarrow 1-x, 0 \rightarrow x \leq 1$$

$$g \text{ دایره } \rightarrow 1-x, 0 \rightarrow x \leq 1 \quad f(x) = g(x)$$

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$$f(x) = x \sqrt{x} \rightarrow x \geq 0$$

$$g(x) = \sqrt{x} \rightarrow x \geq 0$$

$$f(x) = g(x)$$

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$$f(x) = [\sqrt{x} - [\sqrt{x}]] \rightarrow \sqrt{x} \geq 0 \rightarrow x \geq 0$$

$$g(x) = \sqrt{x-1} \rightarrow |x| \leq x \rightarrow \underline{x \geq 0}$$

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$$\frac{f+g}{f-g} \rightarrow \frac{f(1)+g(1)}{f(1)-g(1)} = \frac{1+1}{1-1} = \boxed{\infty}$$

$$\rightarrow \frac{f(1)+g(1)}{f(1)-g(1)} \rightarrow \frac{1+1}{1-1} = \boxed{\text{عبارت بی‌معنی}}$$

$$2.) f(0) \times g(-1) = 0 \times 1 = \boxed{0}$$

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$$\text{الف)} \quad \begin{cases} x=1 \rightarrow a=1 \Rightarrow g(1)=f(1)=1 \\ x=-1 \rightarrow a=0 \Rightarrow g(0)=f(-1)=1 \\ x=0 \rightarrow a=\frac{1}{2} \Rightarrow g(\frac{1}{2})=f(0)=0 \\ x=1 \rightarrow a=\frac{1}{2} \Rightarrow g(\frac{1}{2})=f(1)=1 \\ x=1 \rightarrow a=\frac{1}{2} \Rightarrow g(\frac{1}{2})=f(1)=1 \end{cases} \Rightarrow \left\{ (1,1), (0,1), (\frac{1}{2},0), (\frac{1}{2},1), (1,1) \right\}$$

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$$\rightarrow \text{الف)} \quad \begin{cases} |x|=0 \rightarrow h(0)=f(0)=0 \\ |x|=1 \rightarrow a=\pm 1 \rightarrow h(1)=h(-1)=f(1)=1 \end{cases}$$

$$|x|=1 \rightarrow a=\pm 1 \rightarrow h(1)=h(-1)=f(1)=1$$

$$h = \{ (-1,1), (-1,-1), (0,0), (1,1), (1,-1) \}$$