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$\hookrightarrow a_{-1} = \cdot \rightarrow a = 1$

فقط علالت
۱۲ مه مهبت

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۲ حالت
برای قدرات

$f(x) \neq 0 \rightarrow 2, 3, -4, -5$ (بنایه با 2)

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فردی لیم
بد فرد ۲

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$$\sqrt{\frac{-(-1 \pm \sqrt{1-4})}{2}} = 2$$

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صورت
مستطیل

→
صورت
مستطیل

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$$F(2) + F(10) =$$

$$F(x^4 + x) = 2 \rightarrow \boxed{x=1} \rightarrow F(2) = 2^2 - 1 = 3 \quad F(2) + F(10) \rightarrow 3 + 7 = 10$$

$$F(x^2 + x) = 10 \rightarrow \boxed{x=2} \rightarrow F(10) = 2(2)^2 - 1 = 7$$

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$$F(x) = x^3 - 9x^2 + 12x \xrightarrow{\div x} x(x^2 - 9x + 12) \Rightarrow F(x) = x((x-3)^2 + 3) \xrightarrow{\text{فرضه}} F(\sqrt[3]{2} - 2) = 10$$

$$g(x) = x^3 + 9x^2 + 12x \xrightarrow{\div x} x(x^2 + 9x + 12) \xrightarrow{\text{فرضه}} g(\sqrt[3]{2} - 2) = -20$$

$$\rightarrow \frac{g(\sqrt[3]{2} - 2)}{F(\sqrt[3]{2} + 2)} = \frac{-20}{10} = -2$$

$$f(x) = \sqrt{x+4}\sqrt{x-4} \rightarrow |\sqrt{x-4} + 2| = \sqrt{x+4} + 2$$

$$g(x) = \sqrt{x-4}\sqrt{x+4} \rightarrow |\sqrt{x-4} - 2|$$

$$f(x) + g(x) = \sqrt{x-4} + 2 + 2 - \sqrt{x-4} = 4 \rightarrow 1 \geq x \geq 4$$

$$f(x) + g(x) = \sqrt{x-4} + 2 - 2 + \sqrt{x-4} = 2\sqrt{x-4} \rightarrow x \geq 4$$

$$\rightarrow a=0, b=2, c=-2$$

$$\frac{a+b}{c} = \frac{2}{-2} = -1$$

$$F(x) = \{(2, -4), (0, \frac{2}{3})\}$$

$$g(x) = \{(2, 1), (1, 0), (3, 5), (0, 4)\} \rightarrow \frac{g}{f} = \{(2, -\frac{1}{4}), (0, 6)\}$$

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$$\text{الف) } F(2x) = \{(\frac{1}{2}, 2), (\frac{2}{3}, -1), (2, 2), (-\frac{1}{2}, 4)\}$$

$$\text{ب) } F(x^2) = \{(1, 2), (\sqrt{2}, -1), (2, 2)\}$$

$$\text{ج) } 2g^2(x) + 1 = \{(-2, 19), (1, 3), (3, 9), (-1, 1)\}$$

$$\text{د) } \frac{2F}{g} = \{(1, -4), (2, -1), (-1, \frac{2}{3})\}$$

تن

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ب) $\begin{cases} x^2 = 1 \rightarrow x = \pm 1 \\ x^2 = 2 \rightarrow x = \pm \sqrt{2} \\ x^2 = 4 \rightarrow x = \pm 2 \\ x^2 = -1 \rightarrow x = \pm i \end{cases} \rightarrow \{(\pm 1, 2), (\pm \sqrt{2}, -1), (\pm 2, 2)\}$