

۲. آخرین

باران مرادی

$$\sqrt{(a+1)v} = \sqrt{a} - \sqrt{a} \rightarrow 1\sqrt{a} + 1\sqrt{a} = \sqrt{a} - \sqrt{a}$$

$$1 \cdot a = -18$$

$$a = -18$$

د

$$\frac{1}{\sqrt{x}} \xrightarrow{x=2-\sqrt{3}} \frac{1}{\sqrt{2-\sqrt{3}}} \times \frac{\sqrt{2+\sqrt{3}}}{\sqrt{2+\sqrt{3}}} = \sqrt{2+\sqrt{3}}$$

$$\frac{1}{\sqrt{x}} \xrightarrow{x=2+\sqrt{3}} = \sqrt{2-\sqrt{3}}$$

$$\rightarrow \sqrt{2+\sqrt{3}} + \sqrt{2-\sqrt{3}} + 2 + \sqrt{2-\sqrt{3}} + \sqrt{2+\sqrt{3}} + 2 =$$

$$4 + 2(\sqrt{2+\sqrt{3}} + \sqrt{2-\sqrt{3}}) = 4 + 2\sqrt{4} = 8$$

↓ به توان ۲ می رسانیم

$$2 + \sqrt{3} + 2 - \sqrt{3} + 2 = 6 \rightarrow = \sqrt{6}$$

$$\xrightarrow{x} \sqrt{f(x)} - \sqrt{f(-x)} = \sqrt{x^2 - x^2} \rightarrow (f(x) - 4f(-x)) = 18x^2 - 12x$$

$$\xrightarrow{-x} \sqrt{f(-x)} - \sqrt{f(x)} = \sqrt{x^2 + x^2} \rightarrow 4f(-x) - 9f(x) = 12x^2 + 12x$$

$$\begin{cases} -\omega f(x) = 2 \cdot x^2 + x \\ f(x) = -\frac{1}{2}x^2 - \frac{x}{\omega} \end{cases}$$

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

$$x=0 \rightarrow \sqrt{f(0)} = \sqrt{m-1}$$

$$f(0) = \frac{9}{4}m - \frac{1}{4} \times 4 \rightarrow 4f(0) = 9m - 1$$

$$x=-2 \rightarrow 4f(0) = 14 + \underbrace{2m + 3m - 1}_{\omega m}$$

$$\begin{cases} 14 + \omega m - 1 = 9m \\ 14 = 8m \\ m = \frac{14}{8} \end{cases}$$

$$f(0) = \frac{9}{4} \times \frac{14}{8} - \frac{1}{4}$$

$$= \frac{27 - 2}{4} = \frac{25}{4}$$

ایراق

$$f(0) = \frac{25}{4}$$

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

$$x=-1 \rightarrow \sqrt{f(-1)} = -3 - 12 - 3$$

$$\sqrt{f(-1)} = -18$$

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

د

$$\left. \begin{aligned} f(x) &= (x-1)\sqrt{1-x} \\ g(x) &= (x-1)\sqrt{1-x} \end{aligned} \right\} \begin{aligned} 1-x &\geq 0 \\ x &\leq 1 \end{aligned}$$

$$\sqrt{(x-1)^2(1-x)} = \sqrt{(x-1)^2(1-x)}$$

$$\boxed{\text{برابرند}}$$

د

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$$D_{g,f} = x \geq 0$$

~~برابر~~ (۲)

(۷)

$$D_f = x \geq 0$$

$$D_g = x \geq 0$$

$$x \geq |x|$$

$$x \geq 0$$

~~برابر~~ (۲)

(۱)

(۹)

الف) $\frac{3+3}{3+3} = 3$

(۲)

ب) $\frac{3+3}{3-3} \rightarrow$ تعریف نشده

ج) $5 \times 1 = 0$

(۵)

الف) $g(x) = f_x = \left\{ (1, 1) (0, 4) (\frac{1}{4}, 5) (-\frac{1}{4}, 2) (\frac{5}{4}, -1) \right\}$

ب) $= \left\{ (2, 1) (-2, 1) (0, 5) (3, -1) (-3, -1) \right\}$ (۲)

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

(۴)

$x = -2$ $4f(-2) = 4(-2)^2 + 2m + 3m-1 \rightarrow f(-2) = \frac{15m+15}{4}$

$\frac{15m+15}{4} = \frac{3m-1}{2} \rightarrow 15m+15 = 12m-4 \rightarrow 3m = -19 \rightarrow m = -\frac{19}{3} \notin \mathbb{Z}$

$f(0) = \frac{3m-1}{2} \in \mathbb{Z} \rightarrow \frac{15+5m}{4} \sim f(0) = \frac{3(4, 5)-1}{2} = 4, 25 \in \mathbb{Z}$