

$$\sqrt{x+1} + \frac{1}{\sqrt{x}} + 2 \rightarrow \frac{x+1+\sqrt{x}}{\sqrt{x}} \rightarrow \frac{(\sqrt{x}+1)^2}{\sqrt{x}}$$

$$\sqrt{x-3} + \frac{1}{\sqrt{x-3}} + \sqrt{x+3} + \frac{1}{\sqrt{x+3}} + 4$$

آرین شفا نژاد ۳ رابنریه دم ۱۸

$$2(V)(a+1) + f(a+1) = fa - f \quad (1)$$

$$\Rightarrow f(a+1) + fa - f \Rightarrow 109 = -18$$

$a = -1/18$

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

$$\sqrt{(\sqrt{2-3} + \sqrt{2+3})^2} \cdot f + 2 \cdot 4 \Rightarrow \sqrt{6} \cdot \sqrt{2+3} + f$$

$$2f(u) - 3f(-u) = 1u^2 - u \rightarrow 4f(u) - 9f(-u) = 1u^2 - 2u$$

$$2f(-u) - 3f(u) = f u^2 + u \rightarrow 9f(u) + 4f(-u) = 1u^2 + 2u$$

$$\Rightarrow 2f(u) = 10u^2 + u \Rightarrow f(u) = -\left(\frac{f u^2 + u}{2}\right)$$

$$2f(0) = 3m - 1 \Rightarrow f(0) = \frac{3m-1}{2} \rightarrow 9m - 3 \left\{ \begin{array}{l} 10 + 2m, 9m-2 \\ 14 + 2m + 3m - 1, 10 + 2m \end{array} \right.$$

$$4f(0) = 14 + 2m + 3m - 1 \Rightarrow 10 + 2m \quad 10 \Rightarrow f(0) = m \Rightarrow \frac{10}{4}$$

$$\Rightarrow 2f(0) = \frac{10}{2} = \frac{f}{2} \Rightarrow \frac{20}{4} \Rightarrow f(0) = \frac{5}{2}$$

$$2f(-1) = \frac{3+12+3}{-1} = -18 \Rightarrow f(-1) = -9$$

$$D_f = [-\infty, 1] \rightarrow -(1-u)\sqrt{1-u} \cdot f(u)$$

$$D_g = [-\infty, 1] \rightarrow -\sqrt{(1-u)^2 \times (1-u)} = -|1-u| \times \sqrt{1-u} \rightarrow |1-u| \cdot 1-u$$

$$\Rightarrow g(u) = -(1-u)\sqrt{1-u} \quad \checkmark \text{ (درست جوابه)}$$

$$D_f = [0, +\infty) \quad f(u) = u\sqrt{u}$$

$$D_g = [0, +\infty) \quad g(u) = \sqrt{u \times u} = |u|\sqrt{u} \rightarrow |u| = u \Rightarrow g(u) = u\sqrt{u}$$

$\checkmark \text{ (درست جوابه)}$

$$D_f = [0, +\infty) \xrightarrow[t \geq 0]{t \leq \sqrt{n}} [t - [t]] = 0 \Rightarrow f(u) = 0 \quad \checkmark \text{ (درست)}$$

$$D_g = [0, +\infty) \xrightarrow[n \geq 0]{n \leq \sqrt{n}} \sqrt{n-n} = \sqrt{0} = 0 \Rightarrow g(u) = 0$$

$$\text{الف) } \left(\frac{f+g}{f-g} \right)(1) = \frac{3}{11} = 3$$

$$\text{ج) } f(10)g(-1) = 0$$

↓
0

$$\text{ب) } \left(\frac{f+g}{f-g} \right)(2) = \frac{9}{0} \text{ تعريف مشدد}$$

$$\text{الف) } g(n) = \left\{ (1, 1), (0, 4), \left(\frac{1}{3}, 5\right), \left(-\frac{1}{3}, 2\right), \left(\frac{4}{3}, -1\right) \right\}$$

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