

الف) $\frac{x-1}{x} - \frac{x}{x-1} > 0 \rightarrow \frac{(x-1)^2 - x^2}{x(x-1)} = \frac{x^2 - 2x + 1 - x^2}{x(x-1)} = \frac{-2x + 1}{x(x-1)}$ (۱۲)

ب) $\frac{1}{x+1} - \frac{2}{x} > 0 \rightarrow \frac{-x-2}{x(x+1)} = \frac{-x-2}{x(x+1)}$ $\Rightarrow D_g = (-\infty, -2) \cup (\frac{1}{2}, \infty)$ (۱۳)

د) $\frac{1}{x+1} + \frac{1}{x+2} > 0 \rightarrow \frac{x+2+x+1}{(x+1)(x+2)} = \frac{2x+3}{(x+1)(x+2)}$ $\Rightarrow D_g = (-\infty, -2) \cup (-1, \infty)$ (۱۴)

$D = [1, 12]$

حجم نه چسب این مدل سوال - دلیل غلطی

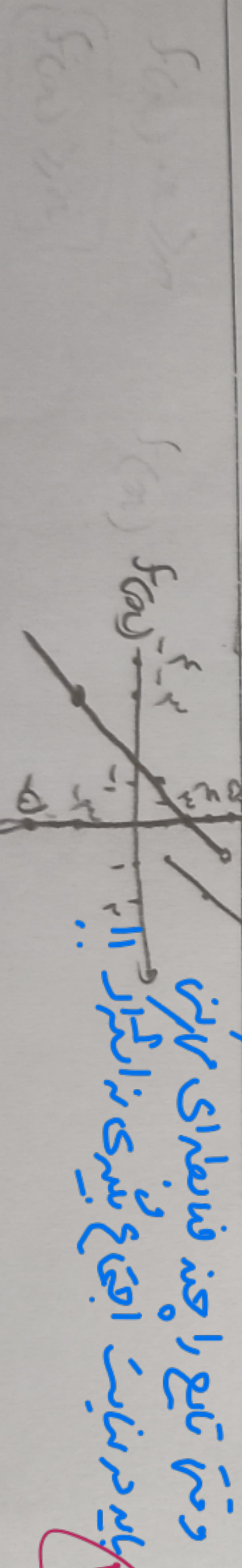
۱- $\sqrt{x+1} + \sqrt{x-1} > 0 \rightarrow x+1 > 0 \rightarrow x > -1$ $\sqrt{x-1} > 0 \rightarrow x > 1$ $\Rightarrow x > 1$ (۱۵)

۲- $\sqrt{x-1} > 0 \rightarrow x > 1$ $\sqrt{x+1} > 0 \rightarrow x > -1$ $\Rightarrow x > 1$ (۱۶)

۳- $\sqrt{x-1} > 0 \rightarrow x > 1$ $\sqrt{x+1} > 0 \rightarrow x > -1$ $\Rightarrow x > 1$ (۱۷)

۴- $\sqrt{x-1} > 0 \rightarrow x > 1$ $\sqrt{x+1} > 0 \rightarrow x > -1$ $\Rightarrow x > 1$ (۱۸)

۵- $\sqrt{x-1} > 0 \rightarrow x > 1$ $\sqrt{x+1} > 0 \rightarrow x > -1$ $\Rightarrow x > 1$ (۱۹)



۶- $\sqrt{x-1} > 0 \rightarrow x > 1$ $\sqrt{x+1} > 0 \rightarrow x > -1$ $\Rightarrow x > 1$ (۲۰)

$$f(x) = f(x+1) + a \rightarrow f(x) = V(x+1) + f(x) = 2a - f$$

$$f(Va+V) = 2a - f + a$$

$$f(a+1) = 2a - f$$

$$10a = -18$$

$$a = -1.8 \quad \checkmark$$

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

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

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

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

$$x \rightarrow f(x) - f(-x) = 2x^2 - x \xrightarrow{\times 2} 2f(x) - f(-x) = 4x^2 - 2x$$

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

$$-2f(x) = 4x^2 + 2x$$

$$f(x) = -2x^2 - x$$

$$f(x) = \frac{-2x^2 - x}{2} \quad \checkmark$$

$$n=0 \rightarrow (0+1)f(0) - 2 \times 0 f(0+1) = 2m-1$$

$$f(0) - 0 = 2m-1$$

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

$$n = -2 \rightarrow f(0) = \frac{12 + 2m}{4}$$

$$\left\{ \rightarrow \frac{2m-1}{2} = \frac{12+2m}{4} \right.$$

و ارامه ...

$$n=-1 \rightarrow f(-1) + f(-1) = \frac{18 + 12 + 2}{-1}$$

$$2f(-1) = -18$$

$$f(-1) = -9 \quad \checkmark$$