

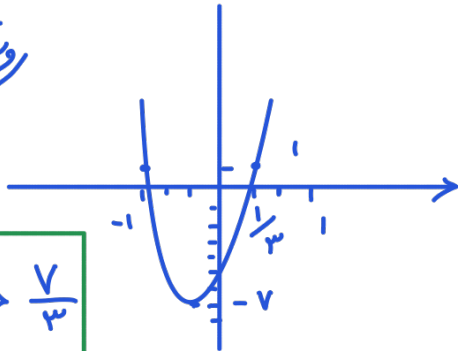
$$S|_x: -\frac{b}{2a} = -\frac{\frac{2}{5}}{\frac{2}{5}} = \frac{3}{5} \Rightarrow S|_{\frac{3}{5}} \Rightarrow S|_{\frac{3}{5}}^{\frac{3}{5}} \Rightarrow S|_{\frac{3}{5}}^{\frac{3}{5}}$$

$$y - \Delta y = -\frac{1}{3}(x - \Delta x)^2 + \frac{1}{5}(x - \Delta x) + 1$$

$$\Rightarrow \Delta x: \frac{17}{5} \Rightarrow y = -\frac{1}{3}(x - \epsilon)^2 + 3 = 0 \Rightarrow \frac{1}{3}(x - \epsilon)^2 = 3$$

$$(x - \epsilon)^2 = 9 \Rightarrow x = 1, x = 7$$

ریشه: α



$$\alpha = -\frac{1}{3} \Rightarrow \frac{1}{3}$$

$$B = -7 \Rightarrow \frac{1}{3}$$

$$y = 1 - 2f(3x + 2)$$

$$x_5 = 1 \Rightarrow 3x + 2 = 1 \Rightarrow x = -\frac{1}{3}$$

$$y_5: f(3x + 2) = 4 \Rightarrow$$

$$y = 1 - 2(4) = -7$$

$$\Rightarrow \alpha = -\frac{1}{3}, \beta = -7 \Rightarrow \frac{1}{3}$$

$$y = 3 - \sqrt{2x} \rightarrow 3 - \sqrt{2(x+1)} \rightarrow y = -3 + \sqrt{2x+2}$$

$$\rightarrow y = -3 + \sqrt{2x+2} + 5 \Rightarrow y = 2 + \sqrt{2x+2}$$

$$2 + \sqrt{2x+2} = \frac{1}{4} \Rightarrow \sqrt{2x+2} = \frac{3}{4} \Rightarrow 2x+2 = \frac{9}{16}$$

$$2x = \frac{1}{4} \Rightarrow x = \frac{1}{8}$$

$$D_f: a < x \leq \epsilon \xrightarrow{Df(x-1)} a < x-1 \leq \epsilon$$

$$D_g: -1 \leq x < b \xrightarrow{Dg(x+1)} -1 \leq x+1 < b$$

$$\cdot a+1 = 2 \Rightarrow a = 1$$

$$\cdot b-1 = 5 \Rightarrow b = 6$$

$$a-b = 1-6 = -5$$

$$\Rightarrow D_g: D_f \cap D_g \Rightarrow (a+1, \epsilon] \cap [-2, b-1) = (2, 5)$$

$$D_y: [-3, 5] \Rightarrow \frac{x}{4} + 1 \Rightarrow -\frac{1}{4} \leq \frac{x}{4} + 1 \leq \frac{5}{4}$$

$$R_y: [-1, 2] \Rightarrow -3 \leq x \leq 5 \Rightarrow -\frac{3}{4} \leq \frac{x}{4} \leq \frac{5}{4}$$

$$\Rightarrow y_r: \sqrt{|2f(x) - 3|} \Rightarrow D_y: [-\frac{1}{4}, \frac{1}{4}]$$

$$\Rightarrow -5 \leq 2f(x) - 3 \leq 1 \Rightarrow 0 \leq 2f(x) \leq 4 \Rightarrow 0 \leq f(x) \leq 2$$

$$y = \frac{b}{a} [ab] = \frac{1}{f}$$

$$\rightarrow ab = 1 \rightarrow b = \frac{a}{f}$$

$$\rightarrow \frac{b}{a} = \frac{1}{f} \rightarrow b = \frac{a}{f}$$

$$\rightarrow a\left(\frac{a}{f}\right) = 1 \rightarrow \frac{a^2}{f} = 1 \Rightarrow a^2 = f \rightarrow a = \pm \sqrt{f} \xrightarrow[\text{پس } +a]{\text{سبب } +}$$

$$a = \sqrt{f} \Rightarrow b = \frac{1}{\sqrt{f}} \Rightarrow \boxed{b - a = -\frac{f-1}{f}}$$

داده های سوال:

$$f(0) = 0$$

$$f(b) = \frac{1}{f}$$

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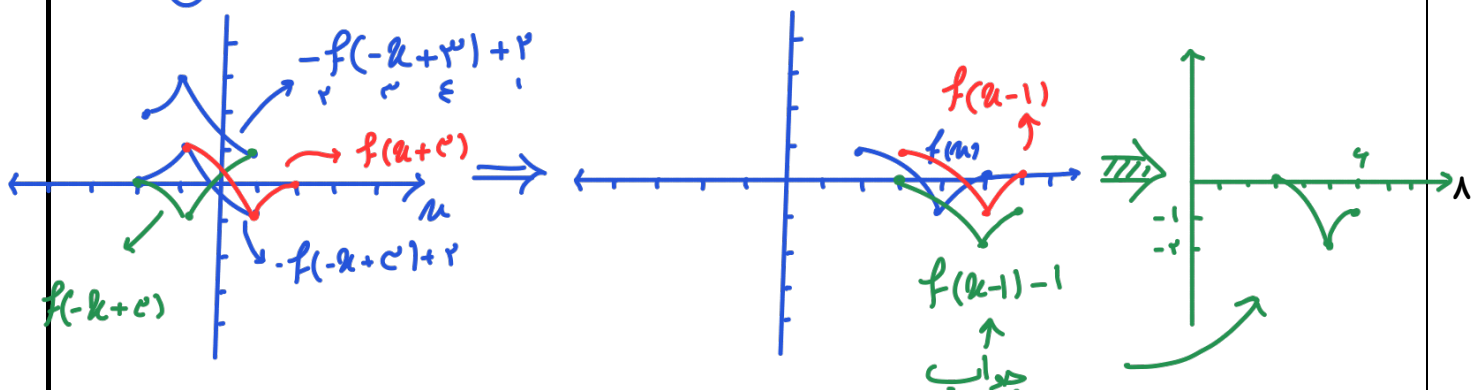
$$\log_r x \xrightarrow{x \rightarrow x+r} \log_r (x+r) \xrightarrow{y \rightarrow -y} -\log_r (x+r) \xrightarrow{+r} -\log_r (x+r) + r$$

$$x \rightarrow -x \rightarrow g(x) = -\log_r^{-x+r} + r$$

$$g(-14) = -\log_r^{14} + r \Rightarrow -r + r = -1 \Rightarrow \boxed{-1 + (-r) = -r}$$

$$g(-62) = -\log_r^{62} + r \Rightarrow -6 + r = -r$$

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$$f(x) = \left| \frac{x+1}{2x+1} \right| \xrightarrow[x \rightarrow x-1]{+1} \left| \frac{x-1}{2x-3} \right| + 1$$

$$x+1 + \left| \frac{x-1}{2x-3} \right| < 0 \Rightarrow \left| \frac{x-1}{2x-3} \right| < -x-1 \Rightarrow -x-1 > 0 \Rightarrow x < -1$$

$$x < -1 \rightarrow \frac{x-1}{2x-3} < -x-1 \Rightarrow \frac{x^2-4}{2x-3} < 0 \Rightarrow \frac{(x-2)(x+2)}{2x-3} < 0 \Rightarrow x < -\sqrt{2}$$

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$$f(x) = x^3 \xrightarrow[y \rightarrow +\infty]{y \rightarrow -\infty} \frac{1}{y^3} \rightarrow \frac{\Delta x + 2}{\Delta y = 27} \Rightarrow (x-2)^3 + 27$$

$$27f(x) - f'(x) \geq 0 \Rightarrow f(x)(27 - f'(x)) \geq 0 \rightarrow 0 \leq f(x) \leq 27$$

$$\Rightarrow 0 \leq (x+2)^3 + 27 \leq 27 \rightarrow -27 \leq (x+2)^3 \leq 0 \rightarrow \frac{x+2}{x-5} \geq -2 \Rightarrow [-5, -2] \rightarrow \boxed{\text{۳ عدد صحیح}}$$

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