

$x_5 = \frac{1}{\omega} \rightarrow \frac{1}{\omega} + \alpha = 1 \Rightarrow \alpha = \frac{1-\omega}{\omega}$
 $y_5 = \frac{1}{\omega} \rightarrow \frac{1}{\omega} + \beta = 1 \Rightarrow \beta = \frac{1-\omega}{\omega}$
 $\Rightarrow y_1 = -\frac{1}{\omega} x^2 + \frac{1}{\omega} x - \frac{1}{\omega} \Rightarrow -\frac{1}{\omega} x^2 + \frac{1}{\omega} x - \frac{1}{\omega} = 0 \Rightarrow a+b+c=0$
 $\boxed{x=1}$
 $\boxed{x=\omega}$

$x \xrightarrow{x+1} x+1 \xrightarrow{x+1} x+1 \Rightarrow y_5 = \begin{cases} 1 \Rightarrow \frac{1-1}{\omega} = -\frac{1}{\omega} \\ 1 \Rightarrow (1-1) + 1 = 0 \end{cases}$
 $y_5 \mid \begin{matrix} -\frac{1}{\omega} \\ -1 \end{matrix} \Rightarrow \alpha \beta = -\frac{1}{\omega} \alpha - 1 = \boxed{\frac{1}{\omega}}$

① $x \text{ متغیر} = -\sqrt{2x+1} + 3$ ② $x \text{ متغیر} = \sqrt{2x+1} - 3$ ③ $y \text{ متغیر} = \sqrt{2x+1} + 3$
 $\sqrt{2x+1} + 3 = \frac{1}{\omega} \Rightarrow \sqrt{2x+1} = \frac{1}{\omega} - 3 \Rightarrow 2x+1 = \left(\frac{1}{\omega} - 3\right)^2 \Rightarrow 2x = \left(\frac{1}{\omega} - 3\right)^2 - 1$

$Df(x-1) = (a+1, \omega)$ و $Dg(x+1) = [-2, b-1]$
 $h(x) = f(x-1) + g(x+1) \Rightarrow D_h = D_{f(x-1)} \cap D_{g(x+1)}$
 $\Rightarrow (a+1, \omega) \cap [-2, b-1] = (-2, m, \omega)$
 $a+1 = -2 \Rightarrow a = -3$
 $b-1 = \omega \Rightarrow b = \omega+1$
 $a-b = -3 - (\omega+1) = -4-\omega$

$\frac{x}{\omega} + 1 \xrightarrow{x+1} x+1 \xrightarrow{x+1} x$
 $D_f = \left[-\frac{1}{\omega}, \frac{1}{\omega}\right]$
 $R_f = [-b, 2]$
 $D_h \Rightarrow |2f(x-1)| \geq 0 \Rightarrow x \in \mathbb{R} \Rightarrow D_h = D_f$
 $\left[-\frac{1}{\omega}, \frac{1}{\omega}\right] \cap \left[\frac{1}{\omega}, \frac{1}{\omega}\right] = \left[\frac{1}{\omega}, \frac{1}{\omega}\right]$
 $([-b, 2]) \cap [-3, \omega] = [-b, 2]$
 $R \mid 2f-3 = [0, \omega] \Rightarrow R \mid \sqrt{2f-3} = [0, \omega]$

$$0 \leq ax < 1 \rightarrow 0 \leq x < \frac{1}{a} \quad \times \rightarrow \frac{1}{a} < x \leq 1 \Rightarrow [ax] = 0$$

$$y = 0$$

$$1 \leq ax < 1+r \rightarrow \frac{1}{a} < x \leq \frac{1}{a} + \frac{r}{a} \rightarrow a < \frac{1}{x} \Rightarrow \frac{1}{x} = \frac{1}{a} + \frac{r}{a}$$

$$[ax] = 1 \Rightarrow A\left(\frac{1}{a}, \frac{1}{a} + \frac{r}{a}\right) \rightarrow \frac{1}{a} = \frac{1}{a+r} = \frac{1}{r}$$

$$\Rightarrow a+r = r \Rightarrow \boxed{a = -r} \Rightarrow y = -\frac{x}{r} [-rx] \Rightarrow b = 1 + \frac{1}{r} = 1$$

$$b - a = 1 + r = r$$

y

$$1 \text{ واحد } y = \log_{\frac{1}{2}} x + 2 \quad \text{قرینه به محور } x = -\log_{\frac{1}{2}} x + 2 \quad \text{قرینه به محور } y = -\log_{\frac{1}{2}} x + 2 + 2$$

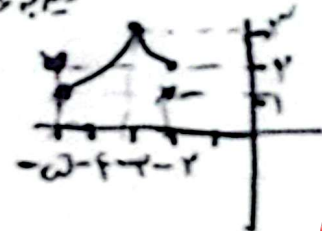
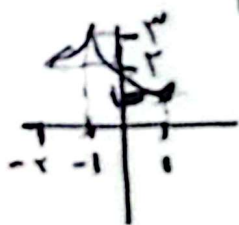
$$y = -\log_{\frac{1}{2}} -x + 2 = g(x) \Rightarrow g(-1) + g(-9)$$

$$= (-\log_{\frac{1}{2}} 1 + 2) + (-\log_{\frac{1}{2}} 9 + 2) = (-1 + 2) + (-3 + 2)$$

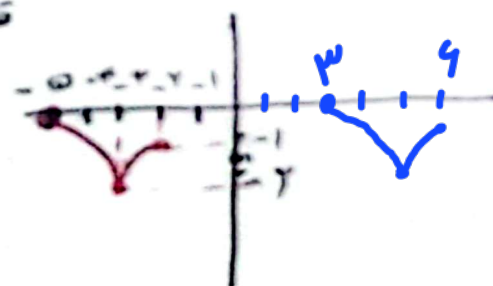
$$= (-1) + (-1) = -2$$

$$1 - f(x-x)$$

قرینه به محور y

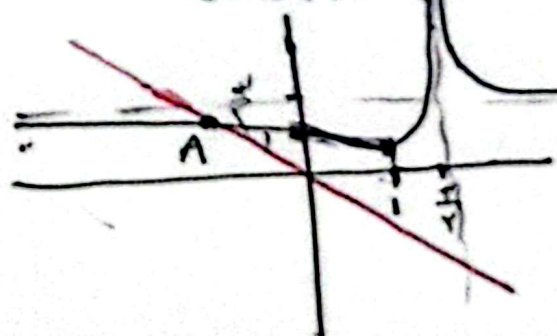


قرینه به محور x



$$g(x) = \left| \frac{(x-2)+1}{2(x-2)+1} \right| + 1 = \left| \frac{x-1}{2x-3} \right| + 1 \Rightarrow x + g(x) < 0 \Rightarrow g(x) < -x$$

$$\Rightarrow \text{جواب ناممکن} = (-\infty, \infty)$$



$$\Rightarrow \frac{x-1}{2x-3} = (-x-1) \Rightarrow -2x^2 + x + 3 = x-1 \Rightarrow -2x^2 = -4 \Rightarrow x^2 = 2 \Rightarrow x = \pm\sqrt{2}$$

$$\Rightarrow \text{جواب} = (-\infty, -\sqrt{2})$$

$$f(x) = (x-3)^3 + 21$$

اگر ما را انتقال یافته است بگیریم $\Rightarrow$

$$g(x) = \sqrt{-f(x)(f(x)-21)}$$

$$\Rightarrow \frac{x-\sqrt[3]{21}}{-1} + \frac{x}{1} =$$

$$\Rightarrow [Dg] = \{0, 1, 2, 3\}$$

$$f(x) = \frac{27}{8}(x-2)^3 + 27$$

در صورت برداشت دیگر از نمودار

۴ تا

۵

۱۰
نقشه
در صورت
برداشت
دیگر

بدین اشتباه شکل ۱۰ را نقطه عطف می گیریم (از استاد پرسیم) پس می نویسیم $\frac{27}{8}$ انتقال یافته است پس

$$f(x) = (x-2)^3 + 27 \Rightarrow g(x) = \sqrt{-f(x)(f(x)-21)}$$

اصلی

$$\Rightarrow \frac{x-\sqrt[3]{27}}{-1} + \frac{x}{1} = \Rightarrow Dg = [-1, 3] \Rightarrow \{ -1, 0, 1, 2, 3 \} = \text{نمودار صحیح}$$

$$21 f(x) - f'(x) \geq 0 \rightarrow f(x)(21 - f'(x)) \geq 0 \rightarrow f(x) = 0 \rightarrow x = 0$$

$$\rightarrow f(x) = 21 \rightarrow x = \frac{1}{3}$$

$$x \in [0, \frac{1}{3}] \rightarrow \text{۳ عدد صحیح}$$