

11, 75

نام و نام خانوادگی: ... کلاس: ... شماره: ... پاسخنامه تشریحی تکلیف شماره ۷ ... دوازدهم A

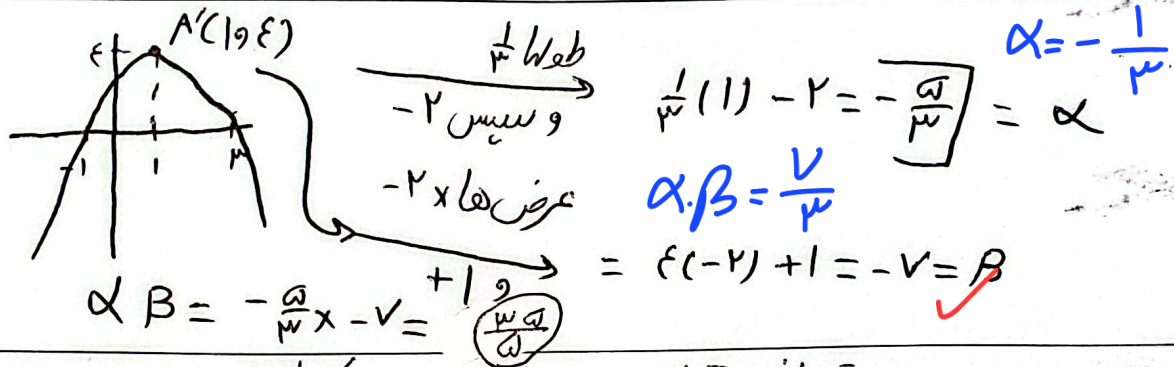
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$$y = -\frac{1}{3}x^2 + \frac{2}{3}x + 1 \rightarrow x_5 = \frac{-b}{2a} = \frac{1}{2} \text{ و } y_5 = \frac{4}{3}$$

$$A'(4, 3) \rightarrow y = -\frac{1}{3}(x-4)^2 + 3 \rightarrow x=1, x=7$$

باید نمودار را تا x_5 ما به x_5 برسیم و $3 - \frac{4}{3} = \frac{5}{3}$ بالا برده تا y ما به $y_{A'}$ برسیم.

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یک واحد به $\sqrt{2}x$ و $\sqrt{2}(\alpha+1)$ محور x ها

$$\sqrt{2}(\alpha+1) - 3 + 4 \rightarrow \sqrt{2x+2} + 2 = \frac{v}{p} \Rightarrow \sqrt{2x+2} = \frac{v}{p}$$

$$\rightarrow 2x+2 = \frac{9}{4} \rightarrow 2x = \frac{1}{4} \rightarrow x = \frac{1}{8}$$

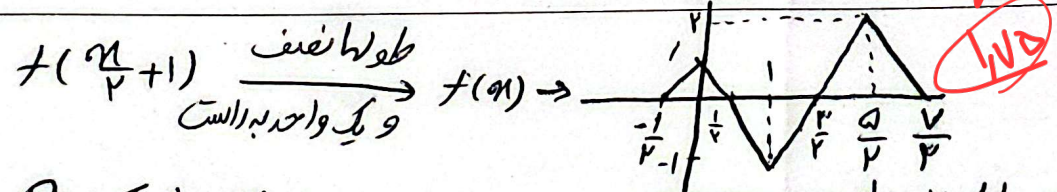
$$D_f = (a, 4] \rightarrow D_f(x-1) = (\alpha+1, 4]$$

$$D_g = [-1, b) \rightarrow D_g(x+1) = [-2, b-1)$$

$$D_f \cap D_g = (-2, 4) \rightarrow \alpha+1 = -2 \Rightarrow \alpha = -3$$

$$\Rightarrow b-1 = 4 \Rightarrow b = 5$$

$$\left. \begin{matrix} \alpha = -3 \\ b = 5 \end{matrix} \right\} a-b = -9$$



$$D_f = [-\frac{1}{2}, \frac{5}{2}] \rightarrow D_{y_2} = [-\frac{1}{2}, \frac{5}{2}]$$

$$R_f = [-1, 2] \rightarrow R_{|2f(x)-3|} = [1, 5] \rightarrow R_{y_2} = [1, 5]$$

$$R_{y_2} = [0, 5]$$

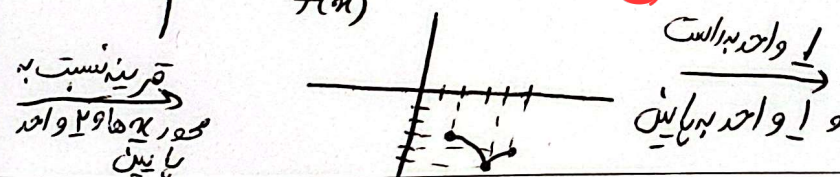
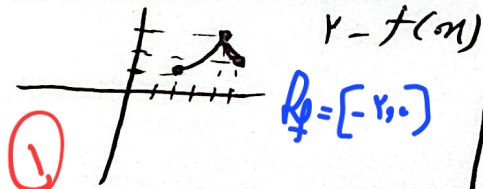
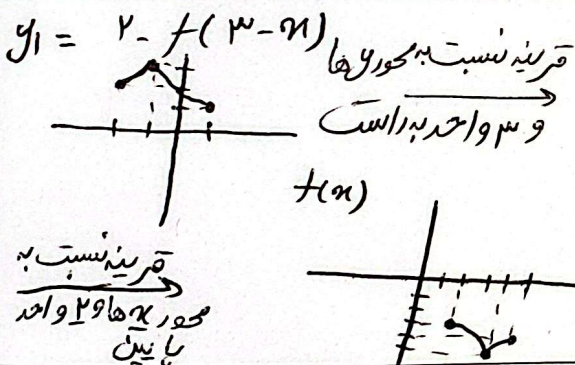
$$\frac{1}{a} = \frac{1}{\varepsilon} \Rightarrow a = \varepsilon$$

$$f\left(-\frac{1}{a}\right) = \frac{1}{\varepsilon} \rightarrow -\frac{1}{a} \varepsilon = \frac{1}{\varepsilon} \rightarrow a \varepsilon = -1 \rightarrow \begin{cases} a = -\frac{1}{\varepsilon} \\ a = -\frac{1}{\varepsilon} \end{cases}$$

$$b=1 \quad b-a=3$$

$$f(x) = \log_2 x \xrightarrow{\text{نقطه ۲}} \log_2 (x+2) \xrightarrow{\text{قرینه نسبت به محور y}} -\log_2 (x+2) \xrightarrow{\text{نقطه ۳}} -\log_2 (x+2) + 3 = g(x)$$

$$g(-1) = -\log_2 1 + 3 = -1 + 3 = 2, \quad g(-3) = -\log_2 1 + 3 = -1 + 3 = 2$$



$$f(x) = \left| \frac{x+1}{2x+1} \right| \xrightarrow{\text{نقطه ۲}} \left| \frac{(x-2)+1}{2(x-2)+1} \right| = \left| \frac{x-1}{2x-3} \right|$$

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

$$\rightarrow x+1 < -\left| \frac{x-1}{2x-3} \right| \rightarrow \frac{2(x-\sqrt{2})(x+\sqrt{2})}{2x-3} < 0$$

با توجه به شکل $y = x^3$ و ۲ واحد به راست و ۲ واحد به بالا رفتن

$$\rightarrow f(x) = (x-2)^3 + 2 \quad x \in \left[0, \frac{4}{3}\right] \rightarrow \text{مجموعه}$$

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

$$2f(x) - f'(x) \geq 0 \rightarrow f(x) / (2 - f(x)) \geq 0$$