

$$y = -\frac{1}{r}x^r + \frac{r}{\delta}x + 1$$

$$S(r, r) \quad h=r$$

$$k=r$$

11

پارس زندگی
سوال 1

$$y = a(x-h)^r + k$$

نویس
صورت

$$y = a(x-r)^r + r \Rightarrow y = -\frac{1}{r}(x-r)^r + r$$

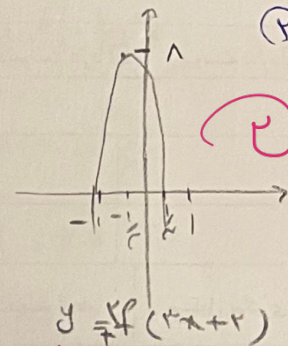
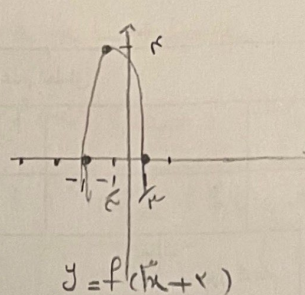
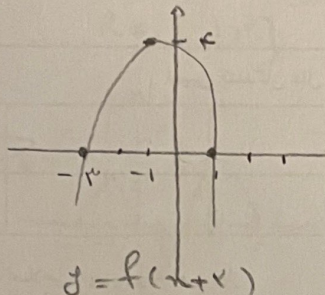
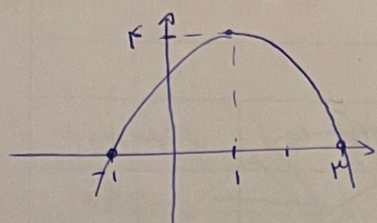
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$$y=0 \Rightarrow 0 = -\frac{1}{r}(x-r)^r + r = \cancel{\frac{1}{r}}(x-r)^r = \cancel{x^r} \Rightarrow (x-r)^r = 9$$

$$\Rightarrow \begin{cases} x-r = r \Rightarrow x=7 \\ x-r = -r \Rightarrow x=1 \end{cases}$$

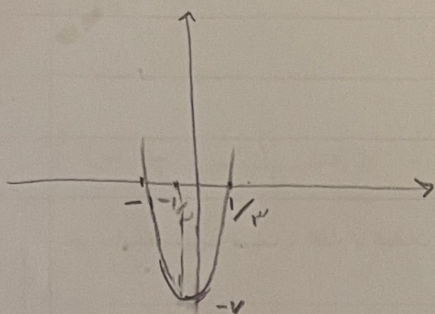
$$\boxed{x=7, 1}$$

$$A(\alpha, B) \quad y = 1 - r f(rx+r)$$



سوال 2

2



$$A(\alpha, B) = (-\frac{1}{r}, -v)$$

$$\boxed{\alpha B = -\frac{1}{r}x - v = \frac{v}{r}}$$

$$y = r - \sqrt{rx}$$

$$y = -\left(r - \sqrt{r(x+1)}\right) + 0 \Rightarrow y = -r + \sqrt{rx+r} + 0$$

$$f(x) = \frac{v}{r}$$

$$\sqrt{rx+r} + r = \frac{v}{r} \Rightarrow \sqrt{rx+r} = \frac{v}{r} - r = \frac{v-r^2}{r} \Rightarrow rx+r = \frac{q}{r}$$

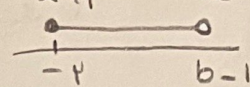
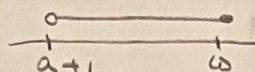
$$\Rightarrow \boxed{x = \frac{1}{r}}$$

سوال 3

2

$$D_f = (a, r] \quad a < x-1 \leq r \Rightarrow a+1 < x \leq r$$

$$D_g = [-1, b) \quad -1 \leq x+1 < b \Rightarrow -r \leq x < b-1$$



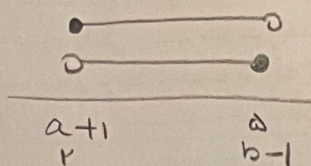
② مثال 3

②

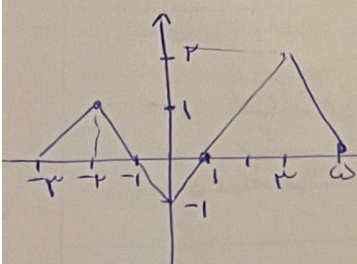
$$\Rightarrow a+1 = -r \Rightarrow \boxed{a = -r}$$

$$b-1 = r \Rightarrow \boxed{b = r+1}$$

✓



$$a-b = -r - (r+1) = -2r-1 \Rightarrow \boxed{a-b = -2r-1}$$



$$y_r = \sqrt{|rf(x)-r|}$$

$$y_r = f\left(\frac{x}{r} + 1\right)$$

③ مثال 4

②

$$\Rightarrow D = [-r, r] \quad -r \times \frac{1}{r} + 1 = -\frac{1}{r} \Rightarrow D_{y_r} = \left[-\frac{1}{r}, \frac{r}{r}\right]$$

$$R = [-1, r] \quad r \times \frac{1}{r} + 1 = 2 \Rightarrow D_{y_r} = \left[-\frac{1}{r}, \frac{r}{r}\right]$$

✓

$$-1 \leq f(x) \leq r \Rightarrow -r \leq rf(x-r) \leq 1$$

$$\Rightarrow 1 \leq \sqrt{|rf(x-r)|} \leq \sqrt{r}$$

$$\boxed{[1, \sqrt{r}]}$$

✓

④ مثال 5

$$f\left(-\frac{1}{a}\right) = \frac{1}{r} \Rightarrow -\left(\frac{1}{a}\right)^r [-1] = \frac{1}{r} \quad b=1 \Rightarrow \boxed{b-a=r}$$

$$\frac{0 \cdot 0 \cdot \dots \cdot 0}{0 \cdot 0 \cdot \dots \cdot 0} \quad a = \frac{1}{r}$$

✓

②

$$f(x) = \log_r x$$

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

⑤ مثال 6

②

$$g(-1) = -\log_r 1 + r = -\log_r 1 + r = -f(1) + r = -1$$

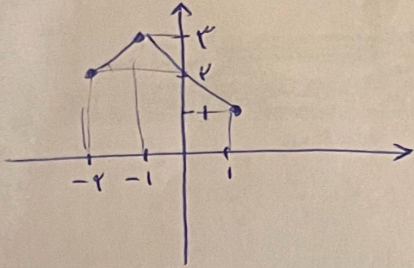
$$g(-4) = -\log_r 4 + r = -\log_r 4 + r = -f(4) + r = -r$$

$$g(-1) + g(-4) = (-1) + (-r) = -r-1 \Rightarrow \boxed{-r-1}$$

✓

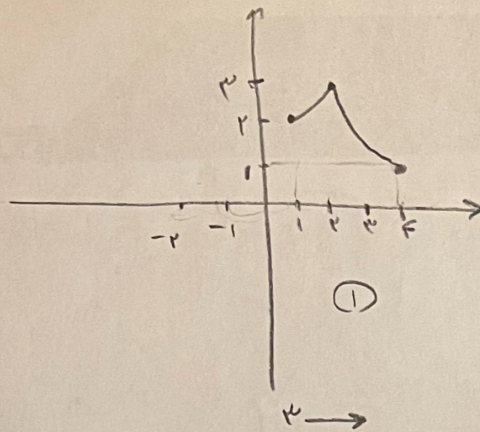
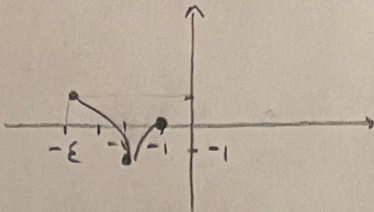
سؤال ٨

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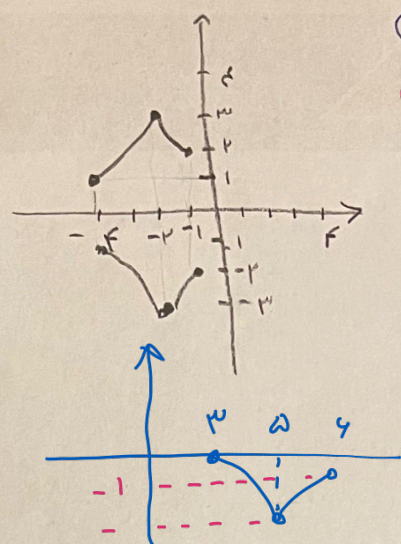


$$y_1 = 1 - f(1-x)$$

$$y_1 = 1 - f(-x+1)$$



①



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

جواب مدعیه صحه

سؤال ٩

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

①

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

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

$$\Rightarrow \frac{2x^2 - 2x - 4}{2x-3} < 0 \Rightarrow \frac{2x^2 - 2x - 4}{2x-3} < 0$$

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$$a(x-r)^p + rv \xrightarrow{\lim(x \rightarrow \infty)} a(-r)^p + rv = 0 \Rightarrow a = \frac{rv}{\wedge}$$

سؤال ١٠

٢

$$f(x) = \frac{rv}{\wedge} (x-r)^p + rv$$

$$\sqrt{\wedge f(x) - f(x)^2} > 0 \quad 0 \leq \frac{rv}{\wedge} (x-r)^p + rv \leq \wedge$$

$$0 \leq \frac{rv}{\wedge} (x-r)^p + rv \Rightarrow \boxed{x \geq 0} \quad ①$$

$$\Rightarrow Dg = \left[0, \frac{\wedge}{r} \right] \Rightarrow \boxed{0, 2}$$

$$\frac{rv}{\wedge} (x-r)^p + rv \leq \wedge \Rightarrow (x-r)^p \leq \frac{\wedge}{rv} \Rightarrow \boxed{x \leq \frac{\wedge}{rv}} \quad ②$$