

دوازدهم رفته A

18 هانریوخیان

کتاب شاه ۵

$$\Rightarrow f(n+1) + f(n+r) = r_n + f(r) \quad (1)$$

$$\Rightarrow r_{n+1} = r \Rightarrow r_n = r \Rightarrow n=1 \Rightarrow f(1) + f(1) = r + f(r)$$

$$(2) \Rightarrow f(r) = r \Rightarrow y = u \Rightarrow \frac{y}{f(n)} \sim \text{توجه کنید}$$

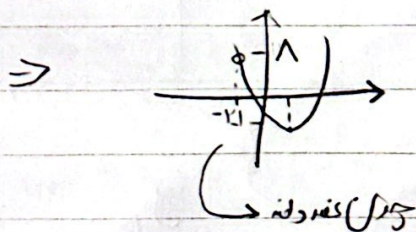
$$\Rightarrow y = \sqrt{f(x) - x^2} : R_f = ?$$

$$\text{حاصل } f(x) = x \Rightarrow y = \sqrt{x - x^2} \Rightarrow \max(x - x^2) = ?$$

$$R_f = \sqrt{[-\infty, \frac{1}{4}]} = [0, \frac{1}{4}] \quad \checkmark \quad x = -\frac{b}{2a} = \frac{1}{2} \Rightarrow \max : (\frac{1}{4} - \frac{1}{4}) = (\frac{1}{4})$$

$$f(n) = \frac{n^3 - r_n}{n+r} \Rightarrow D_f \Rightarrow n+r \neq 0 \Rightarrow n+r \Rightarrow D_f = R - \{1, b\} \quad (2)$$

$$\Rightarrow \text{برای تابع طبق} \Rightarrow [c, +\infty) \cdot \{1\} \Rightarrow \frac{n(n-r)(n+r)}{n+r} = n^2 - r_n \quad (1)$$



$$\Rightarrow c = -1$$

$$a^2 - r_n = 1 \quad \begin{matrix} a = -r \\ b = \frac{a}{2} \end{matrix}$$

$$\Rightarrow a = b = -1$$

$$\Rightarrow f(\frac{a+b}{2}) = f(\frac{-1-1}{2}) = f(-1) = 1 \Rightarrow$$

$$f(x) = \frac{x^3 - r(x)}{x+r} = 0 \quad \rightarrow \quad f(-1) = 1$$

$$y = \sqrt{x^3 + ax^2 + bx - 1} \Rightarrow D_y = [a, b] \Rightarrow \quad (3)$$

$$y = \sqrt{(x-1)^3} \Rightarrow \begin{cases} a = -9 \\ b = 12 \end{cases} \Rightarrow D = [-9, 12] \rightarrow \text{تابع خفی}$$

• dot note $y = x - 2 \rightarrow \text{خفی} \Rightarrow x = -9 \rightarrow y = -11$
 $R_y = [-11, 0] \quad \checkmark$
 $(2) \quad x = 12 \rightarrow y = 10 \Rightarrow$

در بیان (ماتریس) کسری و به عبارتی منفرجه است $D = [-1, 1]$

$$y_1 = \left(\frac{n+1}{1-n} \right)^{\frac{1}{2}} \Rightarrow \sqrt{\frac{n+1}{1-n}} \Rightarrow D_{y_1} = \mathbb{R} - \{1\}$$

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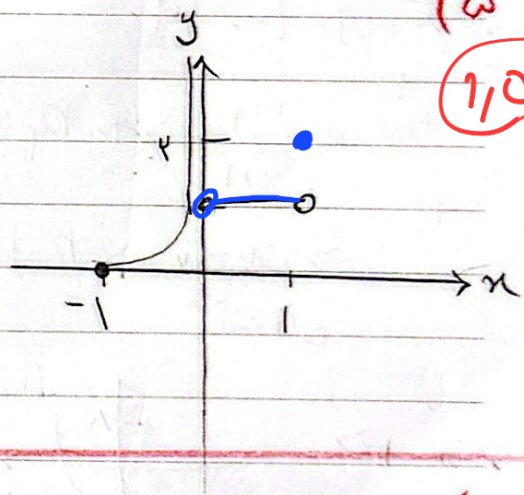
$$y_2 = \frac{ax^2 - 1}{x^2 + b} \Rightarrow \mathbb{R}_{y_2} \Rightarrow \text{تسبیح مقدار} \Rightarrow y_2 = \alpha \Rightarrow y_2 = -\frac{1}{b}$$

$a=1$ $a+b=1$ $b=1$

$$\mathbb{R}_{y_2} = (-\infty, 1) \cup (1, +\infty) \Rightarrow a=1 \checkmark \Rightarrow b=-1 \Rightarrow -\frac{1}{b}=1 \Rightarrow a+b=1-1=0$$

$$\frac{[x]}{x} + \frac{|x|}{x} = \frac{[x] + |x|}{x}$$

$$\begin{aligned} -1 < x < 0 &\Rightarrow [x] = -1 \Rightarrow y = \frac{-1-x}{x} \\ 0 \leq x < 1 &\Rightarrow [x] = 0 \Rightarrow y = \frac{x}{x} = 1 \\ x = 1 &\Rightarrow [x] = 1 \Rightarrow y = \frac{1+1}{1} = 2 \end{aligned} \Rightarrow$$



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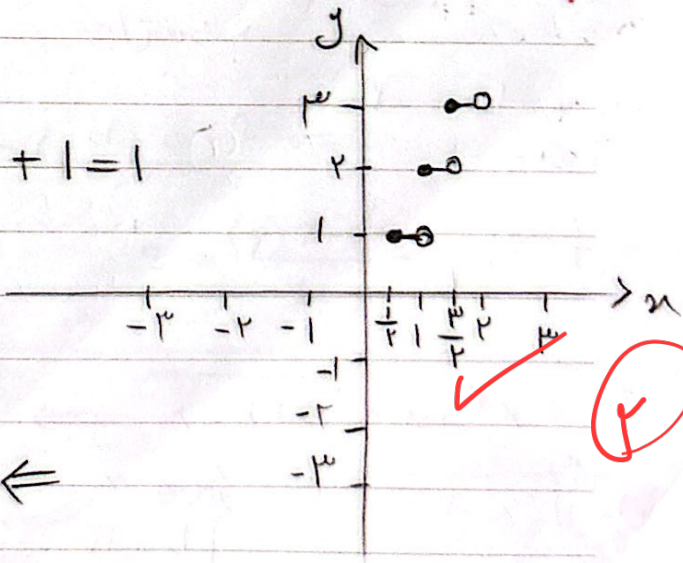
$$y = [x] + \left[x + \frac{1}{r} \right]$$

$$\text{مثال: } \left[\frac{1}{r}, 2 \right)$$

$$x < 1 \Rightarrow y = [x] + \left[x + \frac{1}{r} \right] = 0 + 1 = 1$$

$$1 \leq x < \frac{3}{r} \Rightarrow y = 1 + 1 = 2$$

$$x \geq \frac{3}{r} \Rightarrow y = 1 + 2 = 3$$



سپارده ۱۰

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$$\left| \frac{x+1}{ax+3} \right| \rightarrow y=1 \text{ اوجظ } D:(b, +\infty)$$

پایین تکرار

$$\Rightarrow a-b=3$$

$$a-b=3$$

$$\left| \frac{x+1}{ax+3} \right| < 1 \Rightarrow (|x+1| < |ax+3|) \rightarrow a=1$$

$$b=-2$$

$$|a| > 1 \rightarrow \text{اگر } a=1 \rightarrow \text{بمقدار اصل می کشد} \Rightarrow a=-1 \Rightarrow f(x) = \left| \frac{x+1}{-x+3} \right| \Rightarrow$$

و پایین تر می رود

$$b=3 \rightarrow a-b=-1-3=-4$$

$$|x-2| + |y-1| = 3 \quad \text{ایک مربع داخلی مربع است و فقط مرکز مربع} \quad \Rightarrow \begin{bmatrix} 2 \\ 1 \end{bmatrix} \text{ مرکز مربع}$$

$$\text{قطر مربع} = 6$$

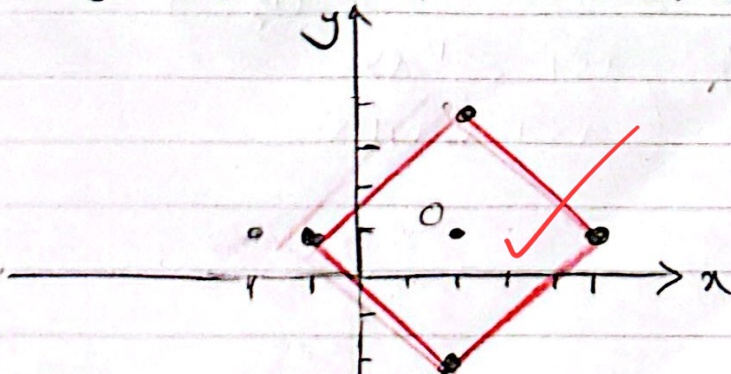
$$\left. \begin{array}{l} x \geq 2 \\ y \geq 1 \end{array} \right\} \Rightarrow x-2+y-1=3 \Rightarrow x+y-3=3 \Rightarrow x+y-6=0$$

$$(x, y) = (2, 4)$$

$$\left. \begin{array}{l} x \geq 2 \\ y < 1 \end{array} \right\} \Rightarrow -y+1+x-2=3 \Rightarrow (x, y) = (5, 1)$$

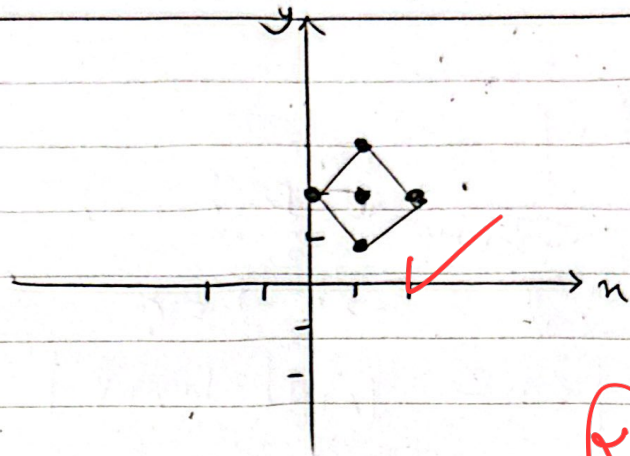
$$\left. \begin{array}{l} x < 2 \\ y \geq 1 \end{array} \right\} \Rightarrow y-1-x+2=3 \Rightarrow (x, y) = (-2, 4)$$

$$\left. \begin{array}{l} x < 2 \\ y < 1 \end{array} \right\} \Rightarrow y = -y+1-x+2=3 \Rightarrow (x, y) = (-1, 1)$$



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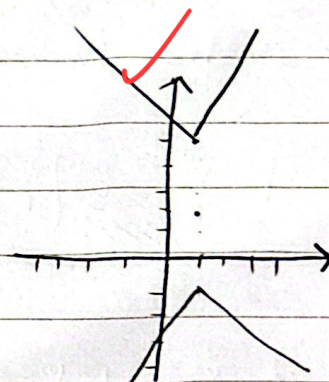
الف) $|x-1| + |y-2| = 1$



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ب) $|x-1| - |y-2| = -3 \Rightarrow |y-2| - |x-1| = 3$



$$y = \begin{cases} r_m + a + b = (a + r)m + b & a + b > 0 \\ r_m - (a + b) = (r - a)m - b & a + b < 0 \end{cases} \Rightarrow (a + r)(r - a) \neq 0$$

$$-3 < a < 3$$

$$\textcircled{1} a > -3, a < 3$$

$$\textcircled{2} a < -3$$

$$\textcircled{3} a > 3$$

$$\textcircled{4} a < -3 \Leftrightarrow \begin{cases} a < 3 \Leftrightarrow 3 - a > 0 \\ a < -3 \Leftrightarrow a + 3 < 0 \end{cases}$$

برای آنکه بر ۱ باشد $\leftarrow$ شیب قائم باشد $\leftarrow m_1 m_2 = -1$