

کتاب

سازینا ستاد

①

$$1ax + a + b + ax + 1a + b = 1x + 1a + b$$

~~1ax + 1b + 1a~~

$$1ax + 1b + 1a = 1x + 1a + b \Rightarrow \begin{matrix} a=1 \\ b=0 \end{matrix}$$

$$y = \sqrt{ax - x^2} \xrightarrow{\text{محدود کردن}} R = [0, \frac{1}{2}]$$

$$-x^2 + x \Rightarrow \left[-\infty, \frac{1}{4} \right]$$

②

$$f(x) = \frac{x(x-1)(x+1)}{x+1} = x^2 - 1x \Rightarrow R = \left[\frac{-1}{1a}, +\infty \right) - \{1\} = [-1, +\infty) - \{1\}$$

$\hookrightarrow \boxed{C = -1}$

$$D = R - \{a, b\} \left\{ \begin{matrix} \text{محدود کردن} \\ \boxed{a = -1} \end{matrix} \right.$$

$$R = [c, +\infty) - \{1\} \quad b^2 - 1b = 1 \Rightarrow (b-1)(b+1) = 0 \quad \begin{matrix} b = -1 \\ \boxed{b = 1} \end{matrix}$$

$$f\left(\frac{-1+1}{-1}\right) = f(-1) = 1$$

$$y_r = \frac{ax^r - 1}{x^r + b} \xrightarrow{x^r \rightarrow +\infty} y = a$$

$$\xrightarrow{x^r \rightarrow 0} -\frac{1}{b}$$

Ⓐ

احتمال منتهی رسیدن داشته و بازه در دسترس است
 $(-\infty, a) \cup (-\frac{1}{b}, +\infty)$

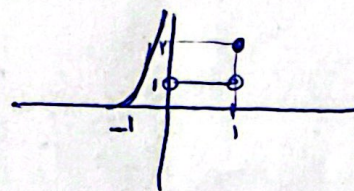
$$D_{y_r} = \mathbb{R} - \{1\}$$

$$-\frac{1}{b} = a = 1 \Rightarrow \begin{matrix} a=1 \\ b=-1 \end{matrix} \boxed{a+b=0}$$

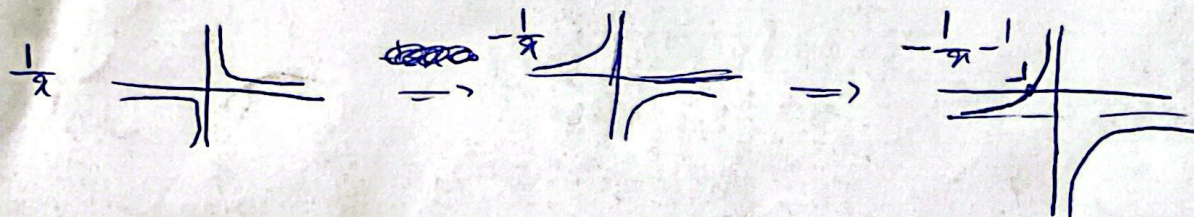
$$x=1 \Rightarrow y=2 \quad -1 \leq x < 0 \quad -\frac{1}{x} \rightarrow -1$$

$$0 \leq x < 1 \Rightarrow y=1$$

$$x=0 \Rightarrow \infty$$



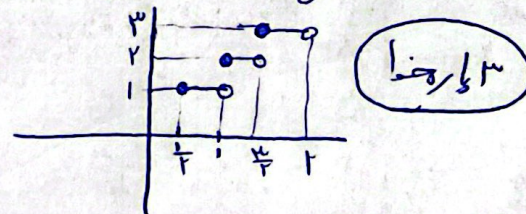
Ⓐ



$$x \in [\frac{1}{4}, 1) \Rightarrow y = 0 + 1 = 1$$

$$x \in [1, \frac{5}{4}) \Rightarrow y = 1 + 1 = 2$$

$$x \in [\frac{5}{4}, 2) \Rightarrow y = 1 + 2 = 3$$



$$x \in (b, +\infty) \Rightarrow \frac{x+1}{ax+3} \begin{matrix} \xrightarrow{x=b} \frac{b+1}{ab+3} \\ \xrightarrow{x=+\infty} \frac{1}{a} \end{matrix}$$

①

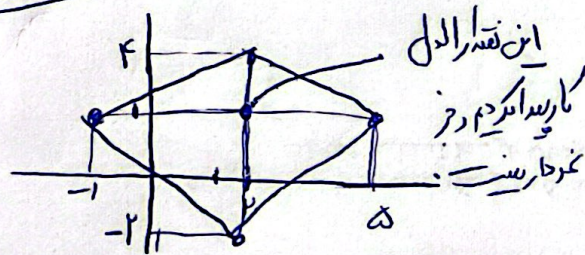
برای آنکه برد بین ۱- باشد باید حتماً ریشه نداشته باشد
 $\left(\frac{b+1}{ab+3}, \frac{1}{a} \right) = (-1, 1) \Rightarrow \frac{1}{a} = 1 \Rightarrow a = 1$
 $\frac{b+1}{b+3} = -1 \Rightarrow -b-3 = b+1 \Rightarrow b = -2$

$$\frac{b+1}{ab+3} = -1 \quad \frac{1}{a} = 1 \Rightarrow a = 1$$

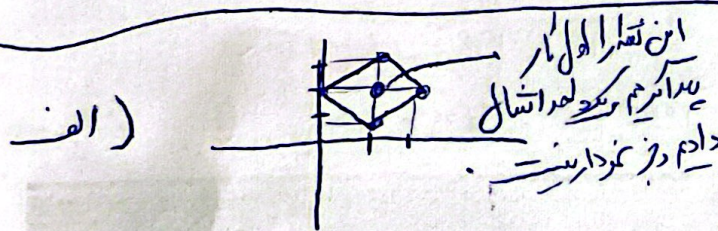
$$\frac{b+1}{b+3} = -1 \Rightarrow -b-3 = b+1 \Rightarrow b = -2$$

$$a-b = 1 - (-2) = 3$$

این عدد در شرط ① صدق می کند پس نیاز به بررسی
 حال $\left(\frac{1}{a}, \frac{b+1}{ab+3} \right) =$

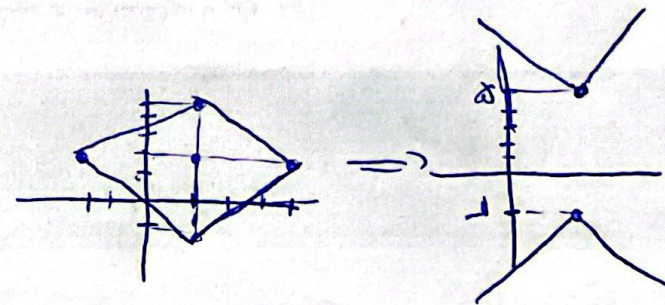


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(الف)

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



②

$$rx + ax + b = (r+a)x + b$$

$$rx - ax - b = (r-a)x - b$$

⑩ به ازای + - درجاسه قدر مطلق شبیه برابر خواهم

~~$$ax = -ax$$~~

$$\left. \begin{array}{l} r+a > 0 \Rightarrow a > -r \\ r-a > 0 \Rightarrow a < r \end{array} \right\} \Rightarrow -r < a < r$$

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$$\left. \begin{array}{l} r+a < 0 \Rightarrow a < -r \\ r-a < 0 \Rightarrow a > r \end{array} \right\} \Rightarrow \begin{array}{c} a < -r \\ \vee \\ a > r \end{array}$$

$$a \in \mathbb{R} - [-r, r]$$

