

دقت کن

$$f(r+1) + f(r) = r+1 \Rightarrow f(r) = r \Rightarrow f(r+1) + f(r) = r+1$$

$$f(n) = an+b \rightarrow a=1, b=0 \Rightarrow f(n)=n$$

$$a=1, b=0 \Rightarrow f(n)=n$$

$$f(r+1) + f(r) = r+1 \Rightarrow (r+1) + r = r+1 \Rightarrow 2r+1 = r+1 \Rightarrow r=0$$

$$R_f = [0, \sqrt{r+1}]$$

$$D_f = [0, 1]$$

$$R_f = [0, 1]$$

(۱)

$$f(n) = \frac{n^2 - 1}{n+1} = \frac{(n-1)(n+1)}{n+1} = n-1$$

$$n^2 - 1 \neq 0 \Rightarrow n \neq \pm 1 \Rightarrow \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow \frac{1 \pm \sqrt{1-4}}{2} \rightarrow \frac{1 \pm \sqrt{-3}}{2}$$

$$D_f = \mathbb{R} - \{a, b\}$$

$$a = 1, b = -1$$

$$f(-1) = (-1)^2 - 1(-1) = 2$$

$$\frac{1-1}{-1} = -1$$

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$$y = \sqrt{n^2 - 2n + 1} = n-1$$

$$R_f = [-1, 1]$$

$$a = -1, b = 1 \Rightarrow D_f = [-1, 1]$$

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$$D_f = [-1, 1] \quad \frac{x+1}{1-x} > 0$$

$$x^2 \rightarrow 0 \rightarrow -\frac{1}{b} = -1 \rightarrow b < 1$$

$$\rightarrow a + b < 1$$

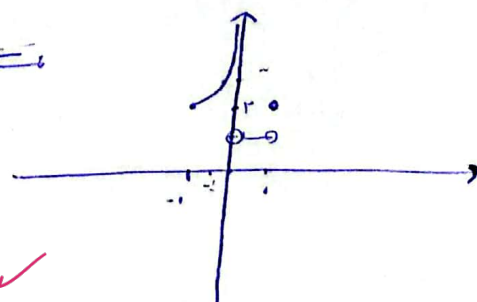
$$L \rightarrow \infty \rightarrow \frac{1}{a} < 1 \rightarrow a < 1$$

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$$\begin{cases} -1 < n < 0 \rightarrow \frac{-1}{n} + \frac{n}{n} = \frac{-1}{n} + 1 \rightarrow \frac{-1+n}{n} \rightarrow \frac{n-1}{n} \rightarrow \frac{n-1}{n} < 0 \rightarrow n < 1 \\ 0 < n < 1 \rightarrow \frac{0}{n} + 1 = 1 \\ n = 1 \rightarrow 1 \end{cases}$$

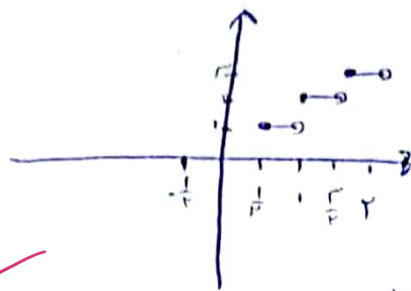
$$D_f = \mathbb{R} - \{0\}$$



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$$\begin{cases} \frac{1}{r} > n > 1 \rightarrow [n] + [n + \frac{1}{r}] = 1 \\ \frac{1}{r} > n > \frac{r}{r} \rightarrow [n] + [n + \frac{1}{r}] = r \\ \frac{r}{r} > n > 1 \rightarrow [n] + [n + \frac{1}{r}] = r \end{cases}$$



نقطه ها

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$$|c| < |d| \rightarrow (c-d)(c+d) < 0$$

$$(x+1+ax+c)(x+1-ax-c) < 0$$

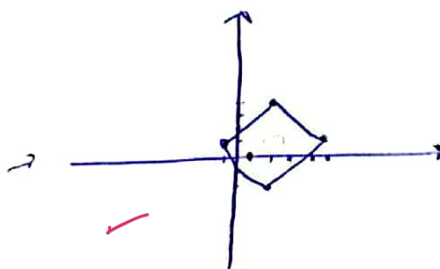
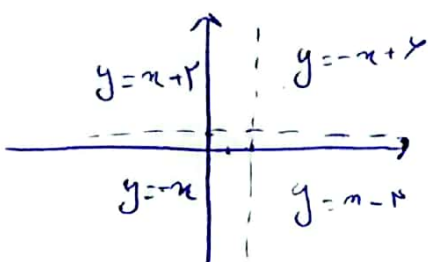
$$a < 1 \quad (2x+2)(-r) < 0 \quad x > -r \quad \checkmark \rightarrow b < -r \quad (a-b) < c$$

$$a < -1 \quad \leftarrow (2x-2) < 0 \quad x < 1 \quad \checkmark$$

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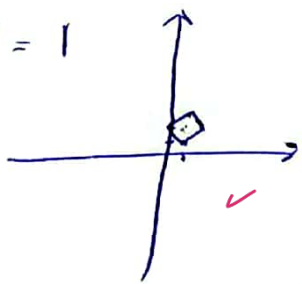
$$|x-r| + |y-1| = r$$



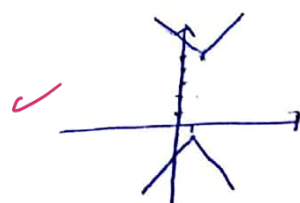
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$$|x-1| + |y-2| = 1$$



$$|x-1| + |y-2| = -r \quad |y-2| + |x-1| = r$$



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$$y = r + |am+b| \rightarrow (r+a)m+b \text{ باشند} \quad (r-a)m-b \text{ تا بر د } \mathbb{R} \text{ مسطور}$$

$$r+a > 0 \rightarrow r > -a \geq -r < a$$

$$r-a > 0 \rightarrow r > a \quad a \in (-r, r)$$

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