

ویند

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B در 5/6 - 5/6

$$f(x+1) + f(x+r) = c_x + f(x) \quad x=1, f(1)=r + f(1) \rightarrow f(1)=r$$

$$f(x+1) + f(x+r) = r_{x+r} \rightarrow y = \sqrt{f(x) - x^r} \Rightarrow \sqrt{x - x^r} \rightarrow (\frac{1}{r}, \frac{1}{r}) \rightarrow \text{مستقیم}$$

$$(-\infty, \frac{1}{r}] \cup [\frac{1}{r}, \infty)$$

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

$$(x-r)(x+r) \rightarrow x \neq r, -r \quad x^r - rx = R = [-1, +\infty) - \{1\}$$

$$f(\frac{a+b}{rc}) = f(\frac{r-v}{-r}) = f(-1) \rightarrow f(-1)=r$$

$$y = \sqrt[r]{a^r + a^r x^r + b^r x^r - 1} \rightarrow y = \sqrt[r]{(x-r)^r} \quad a = -r, b = 1r \quad y, x-r \rightarrow x = [-r, 1r]$$

$$-1 \leq x-r \leq 1 \rightarrow xy = [-1, 1]$$

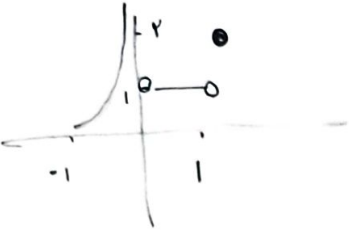
$$(\frac{x+1}{-x+1})^{\frac{1}{a}} \rightarrow \frac{x+1}{-x+1} \rightarrow [-1, 1] \quad \text{در } x \neq 1$$

$$\frac{a^r - 1}{x^r + b} \rightarrow x^r \rightarrow -\frac{1}{b} \quad x = 1, x = a \quad L = [-\frac{1}{b}, a) \cup [-1, 1) \rightarrow a, 1, b = 1$$

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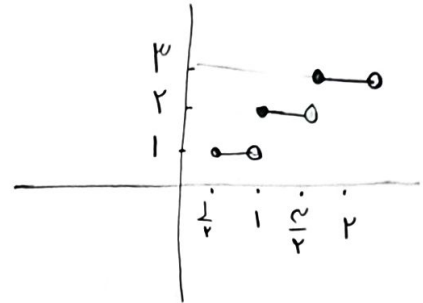
$$0 < x < 1 \rightarrow f(x) = -1 \rightarrow |x| = x \quad \frac{-1}{x} = -1 \rightarrow x = -1 \rightarrow \dots \rightarrow \infty$$

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$$f(x) + f\left(x + \frac{1}{x}\right) \rightarrow \frac{1}{x} \leq x < 1 \rightarrow f(x) = 1$$

$$1 \leq x < \frac{5}{4} \rightarrow f(x) = 2 \quad \frac{5}{4} \leq x < 2 \rightarrow f(x) = 3$$



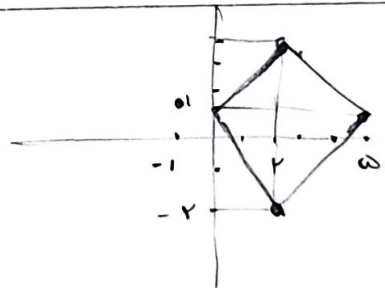
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$$\left| \frac{x+1}{x+2} \right| = 1 \rightarrow \frac{x+1}{x+2} = 1 \rightarrow x+1 = x+2 \rightarrow x = -1$$

$$b = -2, a = 1 \quad a - b = 1 + 2 = 3$$

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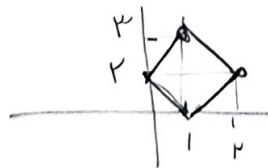
$$|x-2| + |y-1| = 3 \quad \text{مركزه } (2, 1) \text{ و نصف قطره } 3$$



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

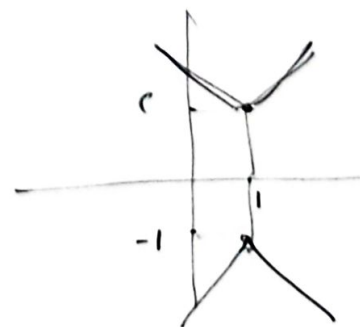
مركزه (1, 2) و نصف قطره 1



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$$|x-1| - |y-2| = -3 \quad \text{مركزه } (1, 2) \text{ و نصف قطره } 3$$

(ب)



$$ax+b \geq 0 \rightarrow (r+a)x+b \quad | \quad ax+b < 0 \rightarrow (r-a)x-b$$

$$r-a \geq 0 \rightarrow a < r, r+a \geq 0 \rightarrow a \geq -r \rightarrow -r < a < r \rightarrow |a| < r$$

5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100

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