

$$f(n) \gg n^2$$

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$$f(x) = \frac{x^3 - 4x}{x + 2} = \frac{x(x-2)(x+2)}{x+2} \xrightarrow{x \neq -2} f(x) = x(x-2) \xrightarrow{D_f = \mathbb{R} - \{-2\}} x(x-2) = 1$$

$$x^2 - 2x - 1 = 0 \rightarrow (x-1), (x+2) = 0 \rightarrow x = -2 \rightarrow x = 1 \Rightarrow D_f = \mathbb{R} - \{-2, 1\} \Rightarrow \boxed{a = -2, b = 1}$$

$$f(x) = x^2 - 2x \xrightarrow{\frac{b}{a} = 1, x=1} -1 \Rightarrow R_f = [1, +\infty) - \{1\} \Rightarrow \boxed{C = -1} / f\left(\frac{1}{-1}\right) = \left(\frac{1}{-1}\right)^2 + 2 = \boxed{3}$$

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$$\sqrt{(x-2)^3} = \sqrt{x^3 + 12x - 4x^2 - 8} \Rightarrow a = -4, b = 12$$

$$D_f = [-4, 12] \rightarrow y = x-2 \xrightarrow{D = [9, 14]} R = [-1, 10]$$

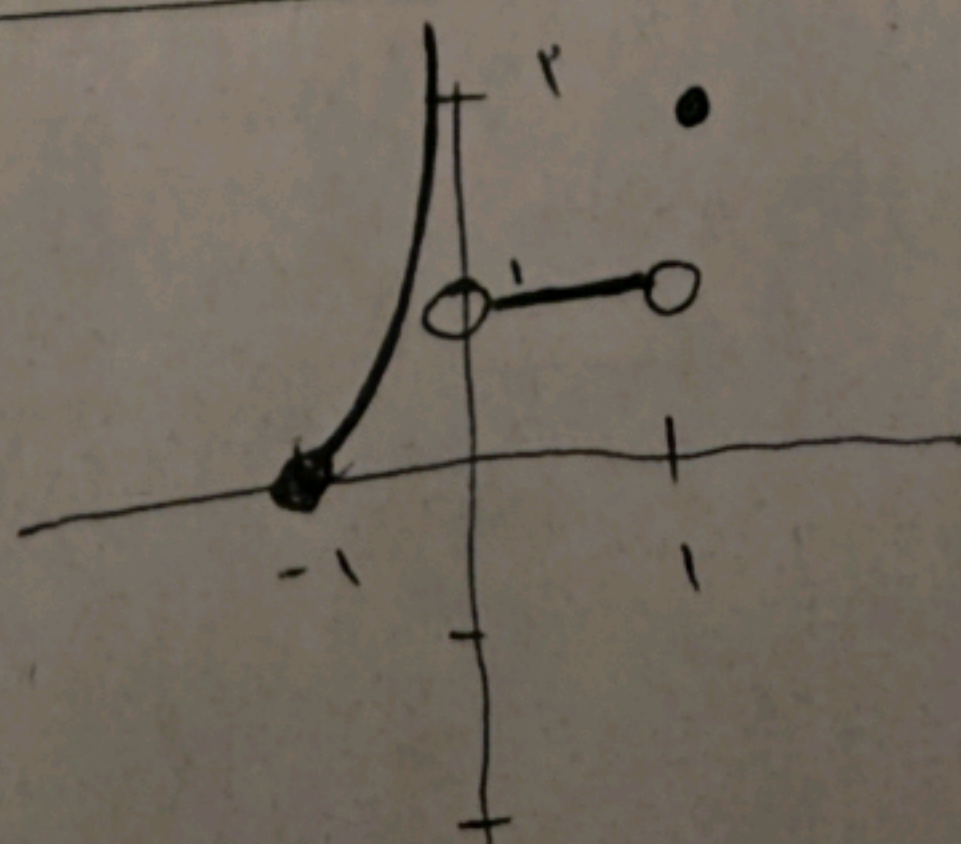
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$$y = \frac{x+1}{1-x} \xrightarrow{D} \frac{x+1}{1-x} \geq 0 \rightarrow \frac{-1}{1-x} \geq 0 \Rightarrow -1 \leq x < 1 : D_y = [-1, 1)$$

$$y = \frac{ax^2 - 1}{x^2 + b} \xrightarrow{R} \left[\frac{-1}{b}, a\right) = [-1, 1) \Rightarrow b = 1, a = 1 \Rightarrow \boxed{a + b = 2}$$

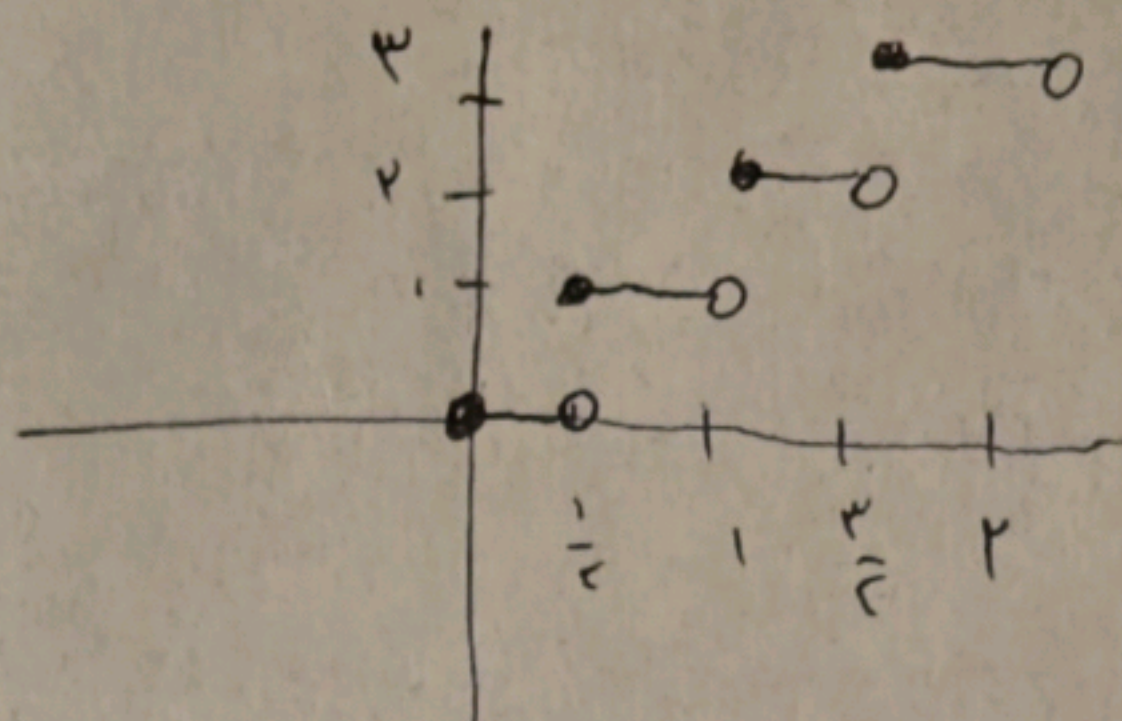
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$$f(x) = \frac{|x| + |n|}{x}$$



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$$y = \lfloor x \rfloor + \lfloor x + \frac{1}{2} \rfloor$$



دستور ۱۴

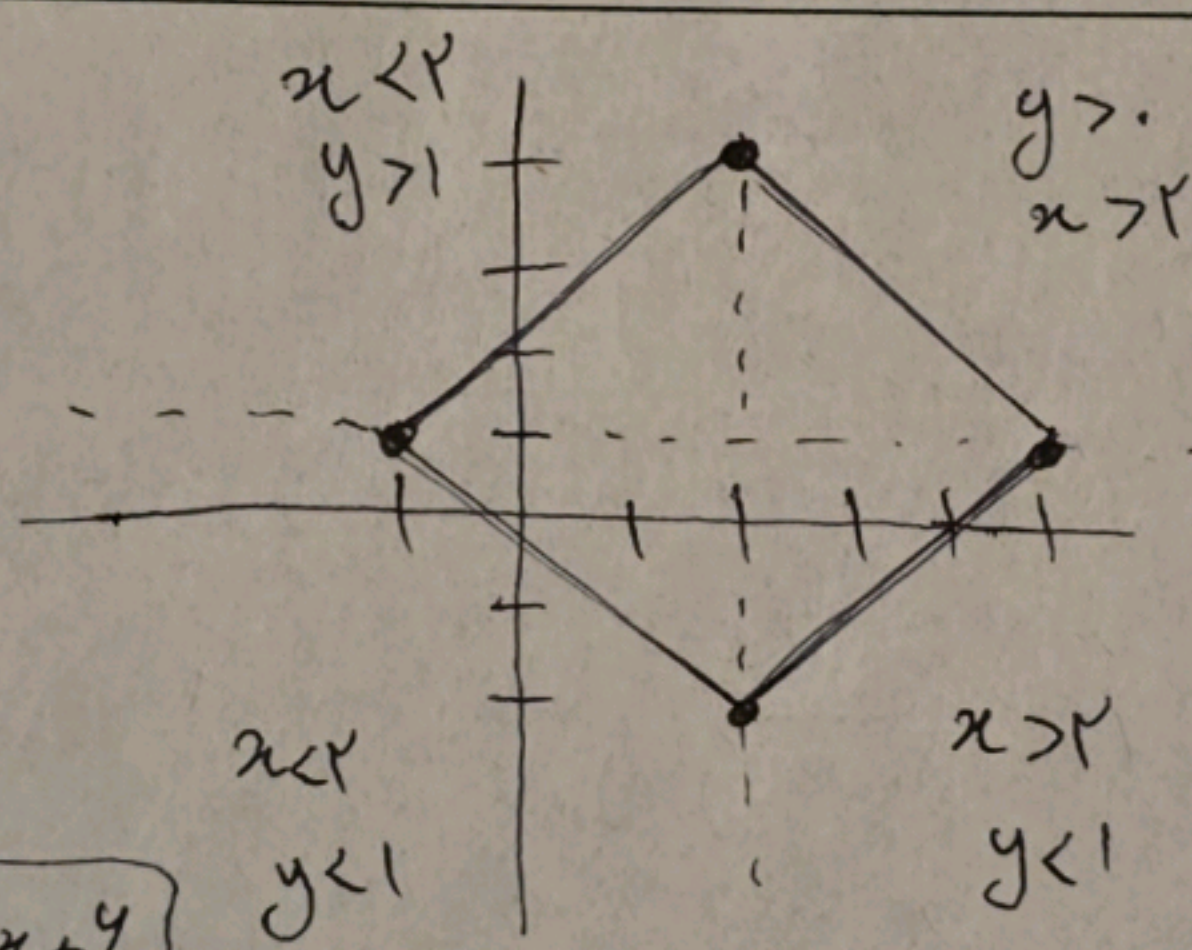
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$$|x-2| + |y-1| = 3$$

$x < 2$
 $y > 1$
 $\rightarrow y - x = 2 \rightarrow y = x + 2$

$x > 2$
 $y > 1$
 $\rightarrow x - 2 + y - 1 = 3 \rightarrow y = -x + 6$

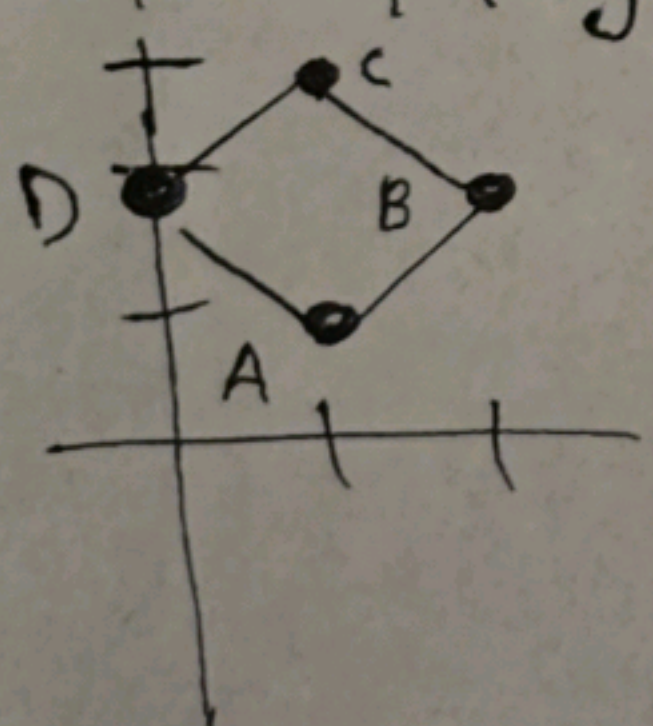


$x < 2$
 $y < 1$
 $\rightarrow 2 - x + 1 - y = 3$
 $y = -x$

$x > 2$
 $y < 1$
 $\rightarrow x - 2 - y + 1 = 3 \rightarrow y = x - 4$

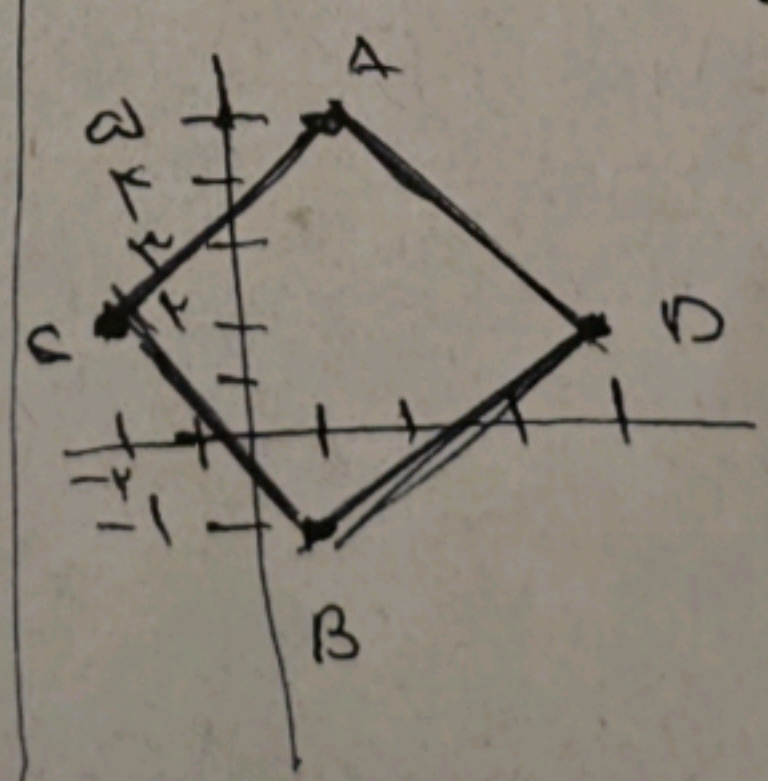
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الف) $|x-1| + |y-2| = 1$



A | 1
B | 2
C | 3
D | 2

ب) $|x-1| - |y-2| = -1$



A | 1
B | -1
C | -2
D | 2

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$$y = \lfloor ax + |a|x + b \rfloor$$

$a = 0$

الر $a = 0$ با a معادله در یک سادگی
شکل مسود کرده آن B است.

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