

-1

①

آزمایش دستی  $\rightarrow n = 0 \rightarrow f(1) + f(2) = f(3) \rightarrow 1 + 2 = 3 \checkmark$   
 رابطه  $f(n) = n$

$$\Rightarrow f: [0, \frac{1}{\gamma}] \checkmark$$

- ۲

$$\rightarrow (u-r)(u+r) \neq 0 \quad \rightarrow u \neq r$$

-۳-

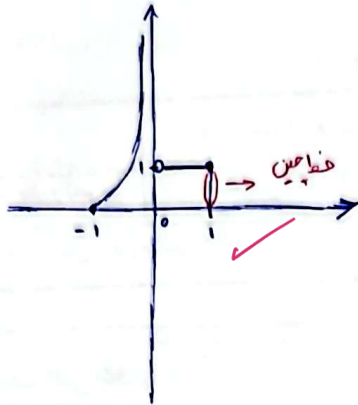
$$D_f: [-4, 12]$$

$$\Rightarrow a+b=1$$



$$? = [-1, 1] \quad \text{در بازه ی}$$

$$y = \frac{[u]}{u} + \frac{|u|}{u} \quad \text{نمودار}$$



~~نمودار~~

$$u = 0^- \rightarrow \frac{-1}{0^-} = +\infty$$

$$u = 0^+ \rightarrow 0 + \frac{0^+}{0^+} = > \text{مربع}$$

$$u > 0 \rightarrow \frac{|u|}{u} = \frac{u}{u} = 1 \quad (1)$$

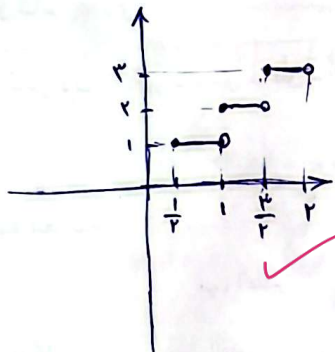
-a (2)

از چند پاره خط تشکیل شده؟  $[\frac{1}{2}, 2)$

$$y = [u] + [u + \frac{1}{2}] \quad \text{در بازه ی}$$

-y (2)

از سه پاره خط تشکیل شده است.



$$u = \frac{1}{2} \Rightarrow 0 + 1 = 1$$

$$u = 1^- \Rightarrow 0 + 1 = 1$$

$$u = 1 \Rightarrow 1 + 1 = 2$$

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

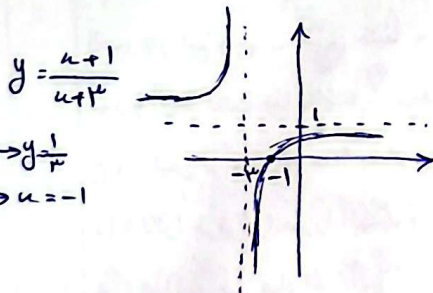
$$u = \frac{3}{2} \Rightarrow 1 + 2 = 3$$

$$u = 2^- \Rightarrow 1 + 2 = 3$$

$$a - b = ?$$

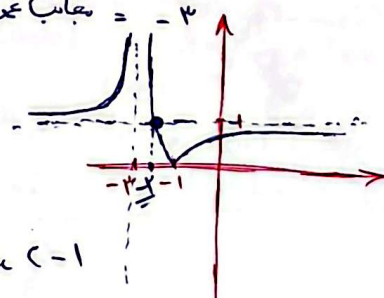
$$(b, +\infty) \quad y = 1 \quad \text{در بازه ی} \quad \left| \frac{u+1}{u+3} \right| \quad \text{دامنه ی}$$

(2)



$$\text{میانگین افقی} = \frac{a}{c} \Rightarrow \frac{1}{a} = 1 \Rightarrow a = 1$$

$$\text{میانگین عمودی} = -\frac{a}{c}$$



$$\Rightarrow (b, +\infty) \Rightarrow \left| \frac{u+1}{u+3} \right| = 1 \Rightarrow -2 < u < -1$$

$$\frac{u+1}{u+3} = \frac{u}{+} \frac{-2}{-} \frac{-1}{+}$$

$$-\left(\frac{u+1}{u+3}\right) = 1 \Rightarrow u+1 = -u-3 \Rightarrow 2u = -4 \Rightarrow u = -2$$

$$a = 1, b = -2$$

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

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

$$① \quad x \geq 2, y \geq 1 \rightarrow x-2+y-1=3 \Rightarrow y = -x+6$$

$$② \quad x \leq 2, y \geq 1 \rightarrow -x+2+y-1=3$$

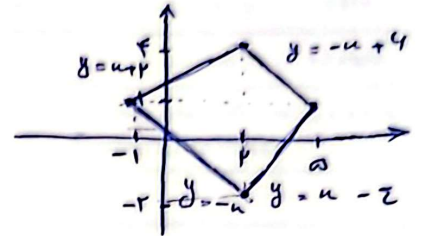
$$y = x+2$$

$$③ \quad x \geq 2, y \leq 1 \rightarrow x-2-y+1=3$$

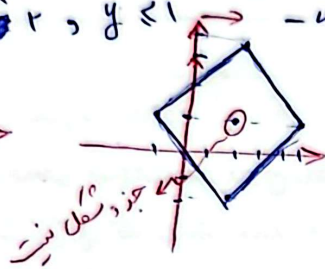
$$y = x-2$$

$$④ \quad x \leq 2, y \leq 1 \rightarrow -x+2-y+1=3$$

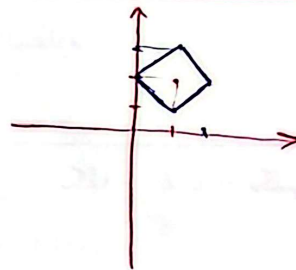
$$y = -x$$



شکل بیت

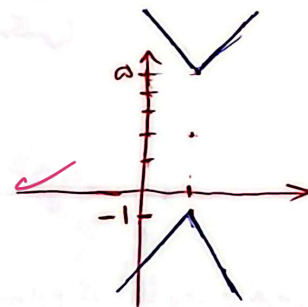


$$الف) |x-1| + |y-2| = 1$$



$$ب) |x-1| - |y-2| = -3$$

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



$$R_f: \mathbb{R}$$

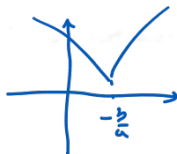
$$y = 3x + |ax + b|$$

$$ax+b \geq 0 \rightarrow y = (3+a)x+b$$

$$ax+b < 0 \rightarrow y = (3-a)x-b$$

$$(3+a)(3-a) < 0 \rightarrow 9-a^2 < 0 \quad a^2 > 9 \Rightarrow |a| > 3$$

سبب خطها باید هم علامت باشند در غیر این صورت



شکل استیلاست

$$9-a^2 > 0$$

$$a^2 < 9$$

$$-3 < a < 3 \rightarrow |a| < 3$$