

مسئله کردیجی - تکلیف شماره ۵

$$f(2n+1) + f(n+2) = 2n + f(2) \xrightarrow{x=1} f(2) = 3 \quad (1)$$

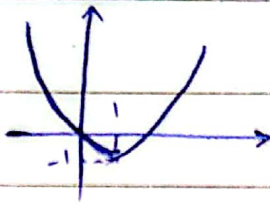
$$\Rightarrow f(2n+1) + f(n+2) = 2n + 3 \Rightarrow \text{تابع هائی} \quad \Rightarrow y = \sqrt{x - x^2}$$

$$\Rightarrow \frac{-b}{2a} = \frac{1}{2} \Rightarrow y = \sqrt{\frac{1}{2} - \frac{1}{2}} \Rightarrow y = \sqrt{\frac{1}{2}} \Rightarrow y = \frac{1}{\sqrt{2}} \Rightarrow R_f = [0, \frac{1}{\sqrt{2}}]$$

$$\frac{x(x-2)(x+2)}{x+2} = x^2 - 2x \quad (2)$$

$x+2 \rightarrow x \neq -2$

$\Rightarrow a = -2, b = 2$



$R = [-1, +\infty) - \{1\}$
 $a = -2, b = 2$

$$\Rightarrow \frac{x^2 - 2x}{x+2} = 1 \Rightarrow x+2 \Rightarrow Df = R - \{-2, 2\}$$

$$\rightarrow f\left(\frac{2}{-2}\right) = f(-1) = \frac{-1+2}{1} = 1 \quad (3)$$

$$\text{تابع } \Rightarrow y = \sqrt{(x-2)^2} = \sqrt{x^2 - 4x + 4} \Rightarrow a = -2, b = 2 \quad (4)$$

$$\rightarrow D_f = [-2, 2] \Rightarrow R_f = [-1, 1]$$

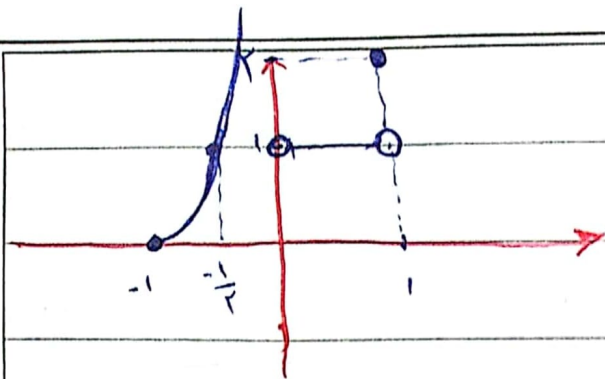
$$g_1 = \left(\frac{n+1}{1-n}\right)^{\frac{1}{2}} \Rightarrow D_{g_1} = [-1, 1] \quad (5)$$

$x \neq 1$

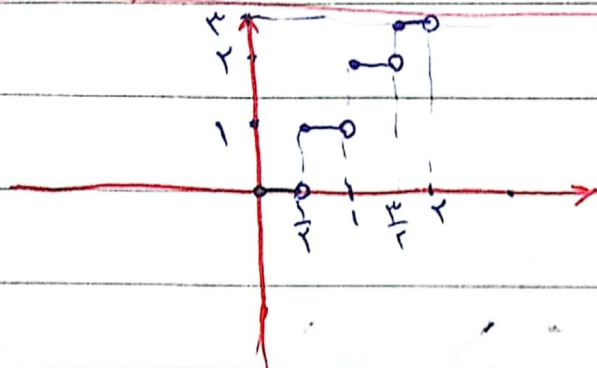
$\frac{-1}{-1+1} = -$

$$g_1 = \frac{ax^r - 1}{x^r + b} \quad \begin{cases} \text{min} \rightarrow x^r = 0 \rightarrow y = \frac{-1}{b} \\ \text{max} \rightarrow x^r = +\infty \rightarrow y = a \end{cases} \Rightarrow D_{g_1} = R_{g_1} \Rightarrow \left[\frac{-1}{b}, a\right] = [-1, 1]$$

$$\Rightarrow b = 1, a = 1 \Rightarrow b+a = 2$$



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$$\frac{1}{2} < x < 1 \rightarrow y = 1$$

$$1 \leq x < \frac{3}{2} \rightarrow y = 1$$

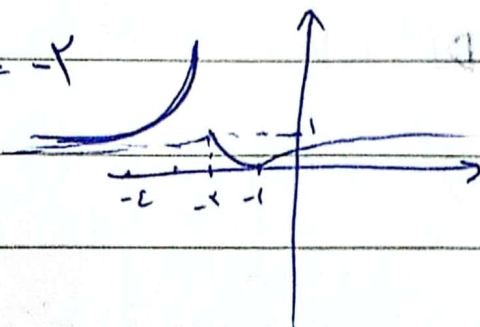
$$\frac{3}{2} \leq x < 2 \rightarrow y = 2$$

۳، ۲، ۱ خط

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۷) درون قند مطلق عبارت همگرا نیست و هر قدر a بزرگ تر باشد نمودار جمع قریب سردیست

$$a = 1 \text{ و } b = -2$$



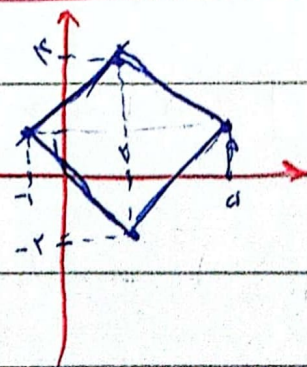
$$x \geq 2 \rightarrow y \geq 1 \rightarrow -x + 4 = y$$

$$x \leq 2 \rightarrow y \geq 1 \rightarrow x + 2 = y$$

$$x \geq 2 \rightarrow y \leq 1 \rightarrow x - 2 = y$$

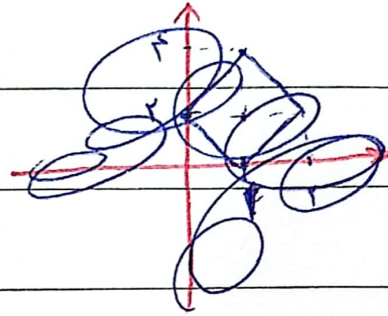
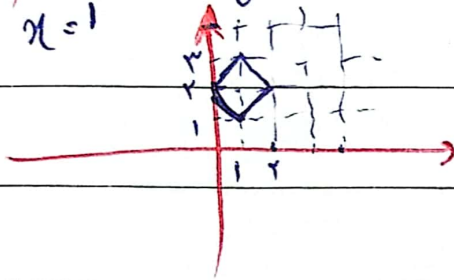
$$x \leq 2 \rightarrow y \leq 1 \rightarrow -x = y$$

$\rightarrow$



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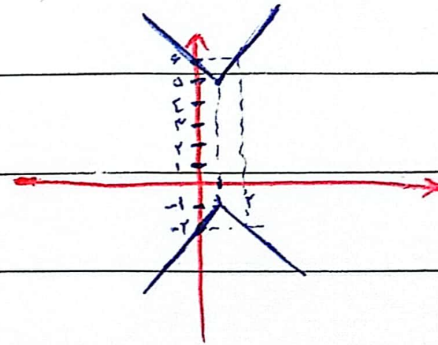
الف) $|x-1| + |y-2| = 1$
 $x=1$



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ب) $|x-1| - |y-2| = -3$
 $y=4, x=1$

از الیاد



$y = kx + |ax+b| \Rightarrow$

$$\frac{-a+b}{(k-a)x-b} \mid \frac{+}{(k+a)x+b}$$

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بسیار

$\Rightarrow b=0$

و

$(k+a)(x-a) \rightarrow$

$$\frac{-k}{-} \mid \frac{+}{+} \mid -$$

$\Rightarrow a \in (-3, 3)$