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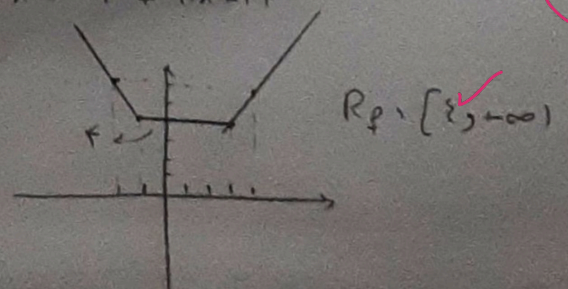
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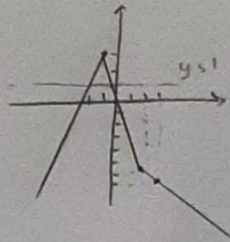
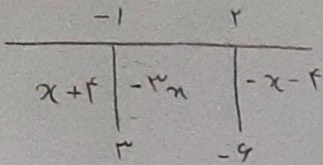
کتابخانه

کلاس دوازدهم فقه A

نام دانش آموز: ...

(۲)

$$|x-1| - |2x+2| \leq 1$$



$$x+1 \leq 1 \Rightarrow x \leq 0$$

$$-3x \leq 1 \Rightarrow x \geq -1/3$$

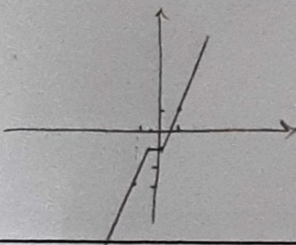
$$\Rightarrow \text{جواب } (-\infty, 0] \cup [-1/3, +\infty)$$

$$-\frac{1}{3} - 0 + 1/2 \leq -1/2 \quad \frac{1}{2} - 0 + 1 = 1/2$$

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$$y \leq \ln - |2x+1| + |x|$$

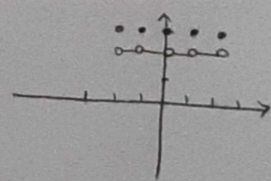
$$\begin{vmatrix} 0 & -1/2 & 1 & -1 \\ -1 & -1 & 1 & -1 \end{vmatrix}$$



$$R_f: \mathbb{R}$$

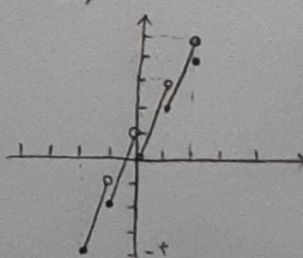
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$$\text{الف) } [x] + [-x] + 2 \rightarrow \begin{cases} 2 & x \in \mathbb{Z} \\ 1 & x \notin \mathbb{Z} \end{cases}$$



$$R: \{1, 2\}$$

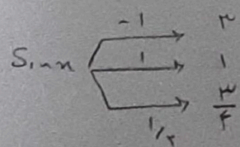
$$\begin{aligned} x \in [-2, -1) &\Rightarrow 2x+2 \\ x \in [0, 1) &\Rightarrow 2x \\ x \in [2, 3) &\Rightarrow 2x-2 \\ \text{ب) } x \in [-1, 0) &\Rightarrow 2x+1 \\ x \in [1, 2) &\Rightarrow 2x-1 \end{aligned}$$



$$R: [-1, 2]$$

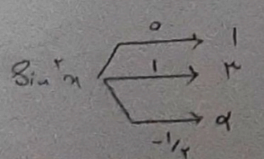
(۲)

$$\text{الف) } y \leq \sin^2 x - \sin x + 1$$



$$\Rightarrow R: [3/4, 1]$$

$$\text{ب) } y \leq \sin^2 x + \sin x + 1$$



$$\Rightarrow R: [1, 3/4]$$

$$\text{ب) } y = |x| + \frac{1}{|x|} \xrightarrow[\alpha + \frac{1}{\alpha} \geq 2]{\alpha > 0} |x| + \frac{1}{|x|} \geq 2 \rightarrow R_y = [2, +\infty) \quad -1$$

$$\text{الف) } \max \left| \begin{array}{l} -\frac{b}{2a} = 2 \\ y = 3 \end{array} \right. \Rightarrow R_y = \sqrt{(-\infty, 3]} = [0, \sqrt{3}] \quad -2$$

$$\text{ب) } \min \left| \begin{array}{l} -\frac{b}{2a} = 2 \\ y = -1 \end{array} \right. \Rightarrow R_y = \sqrt{[-1, +\infty)} = [-2, +\infty)$$