

۱۶، ۷۵

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۴ ... کلاس ۱۰۱ ...

$$x = -1 \rightarrow 3x(-1) - 2 = -1$$

$$x = -2 \rightarrow 3x(-2) - 2 = -1$$

$$D_f = [-1, -2] \checkmark$$

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$$-4 \leq 3x - 2 \leq 2$$

$$-4 \leq 3x \leq 4$$

$$-\frac{4}{3} \leq x \leq \frac{4}{3} \checkmark$$

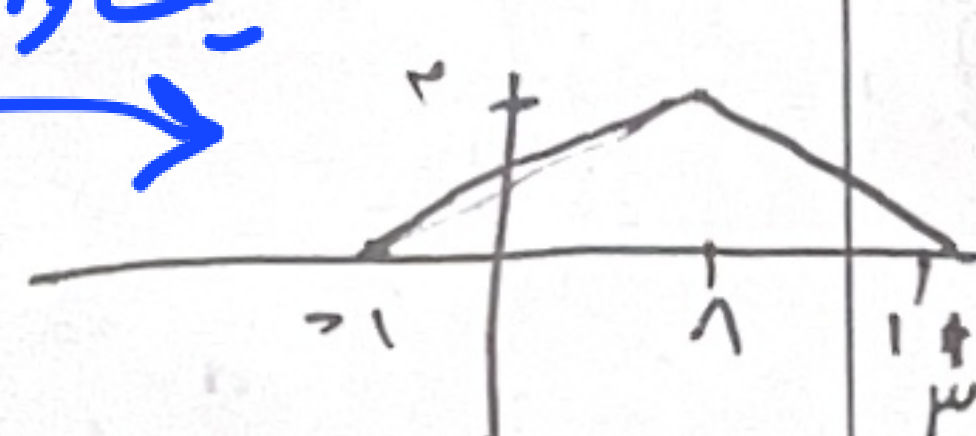
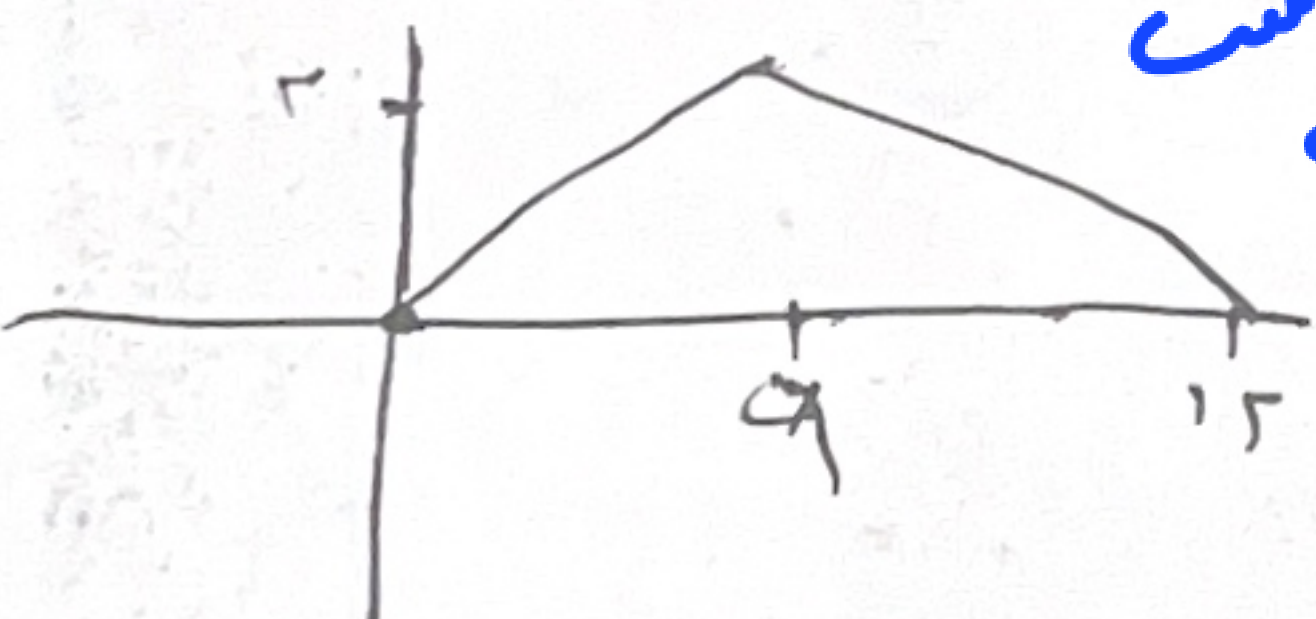
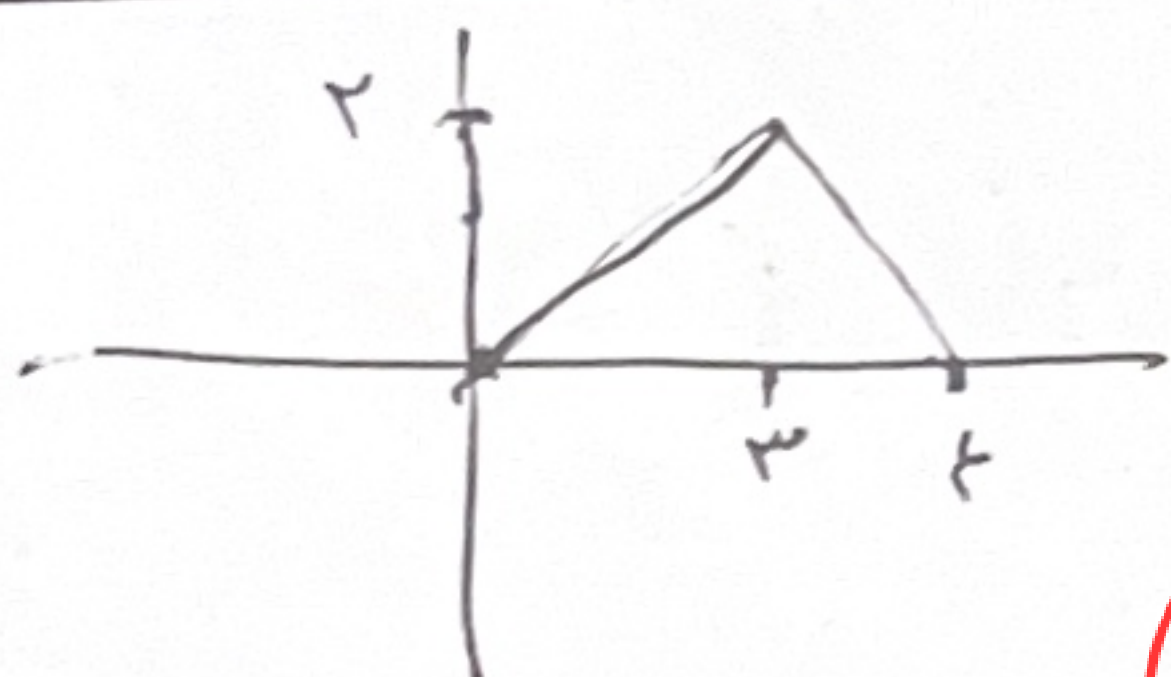
$$x + \sqrt{x-2} \xrightarrow{\text{دو واحد بیاض}} x - 2 + \sqrt{x-2} = y \xrightarrow{\text{تغییر}} f^{-1}(y)$$

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$$\Rightarrow x_{f(x)} = y_{f^{-1}(y)} \Rightarrow x - 2 + \sqrt{x-2} = y \Rightarrow \sqrt{x-2} = 2$$

$$\Rightarrow x - 2 = 4 \Rightarrow x = 6 \Rightarrow y_{f^{-1}(6)} = 1 \checkmark$$

یک واحد راست

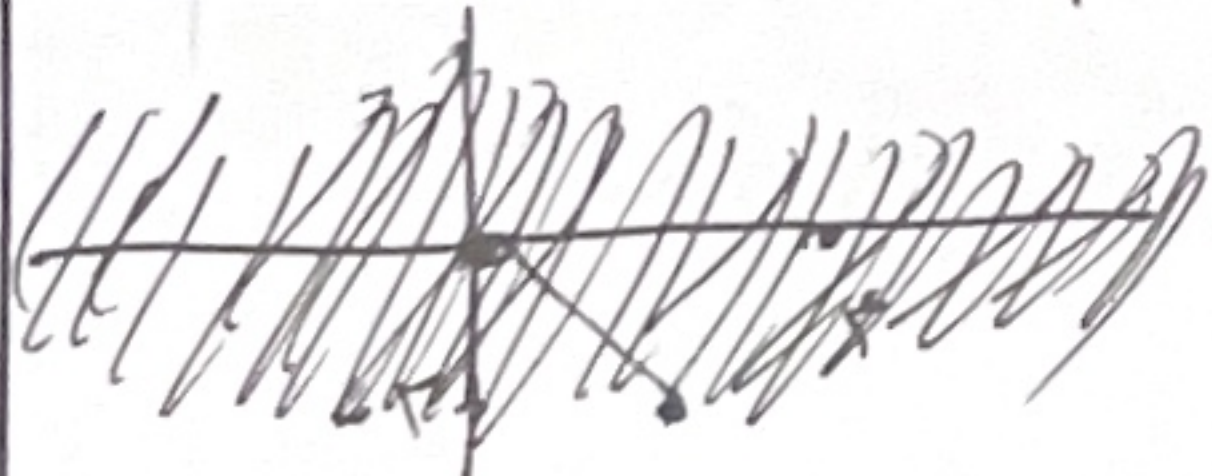


$$f(3x+1)$$

$$f(x+1)$$

$$D_f = [1, 3]$$

$$\Rightarrow S = \frac{12 \times 5}{2} = 12 \checkmark$$



$$\frac{x' + 4}{2} = 2 \Rightarrow x' = 0 + 4 \mathbb{Z}$$

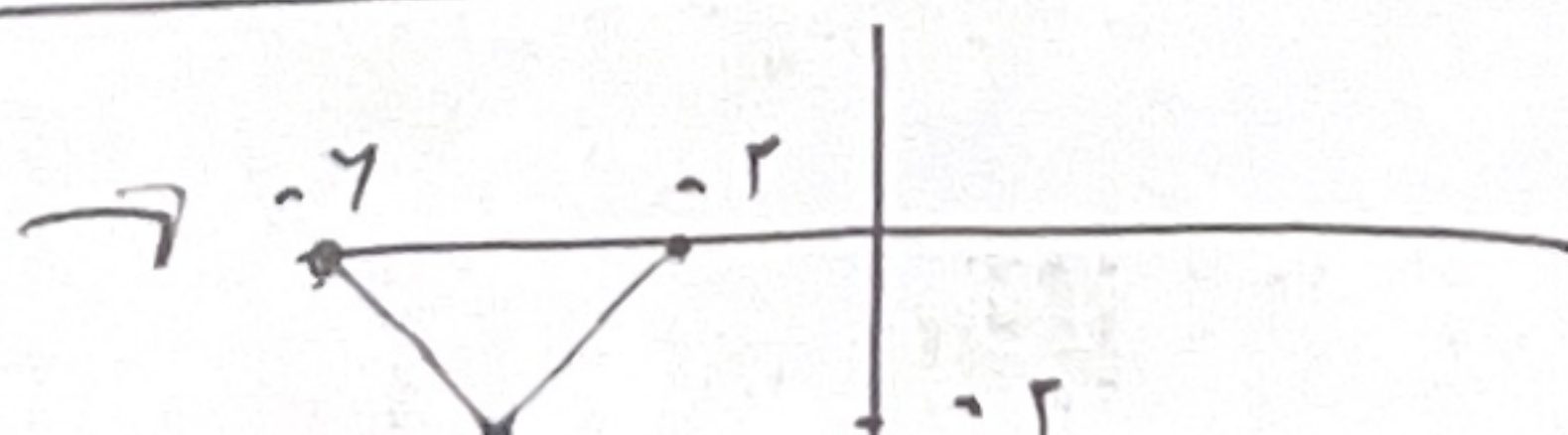
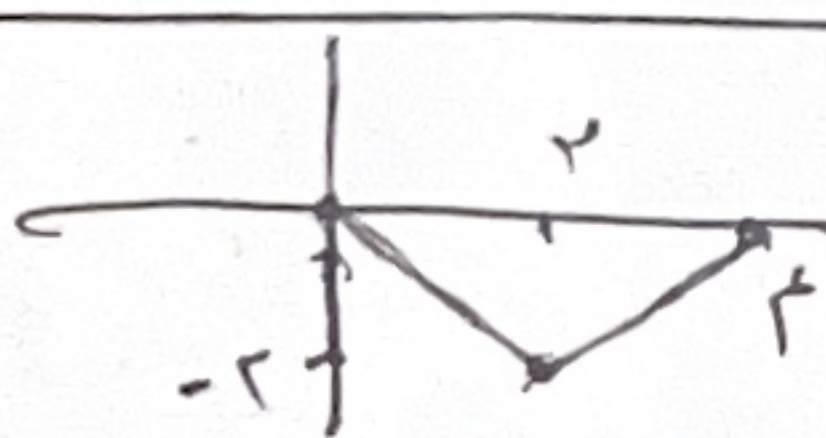


$$y' = 0 + 1 f(2) \neq$$

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$$I \cap II : A' \mid \begin{matrix} a+2 \\ a-2 \end{matrix}$$

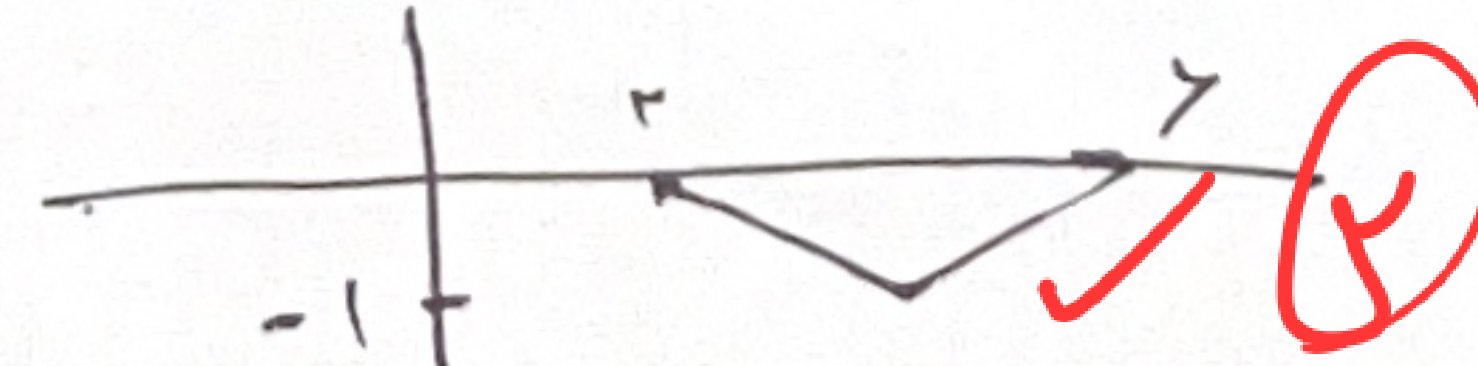
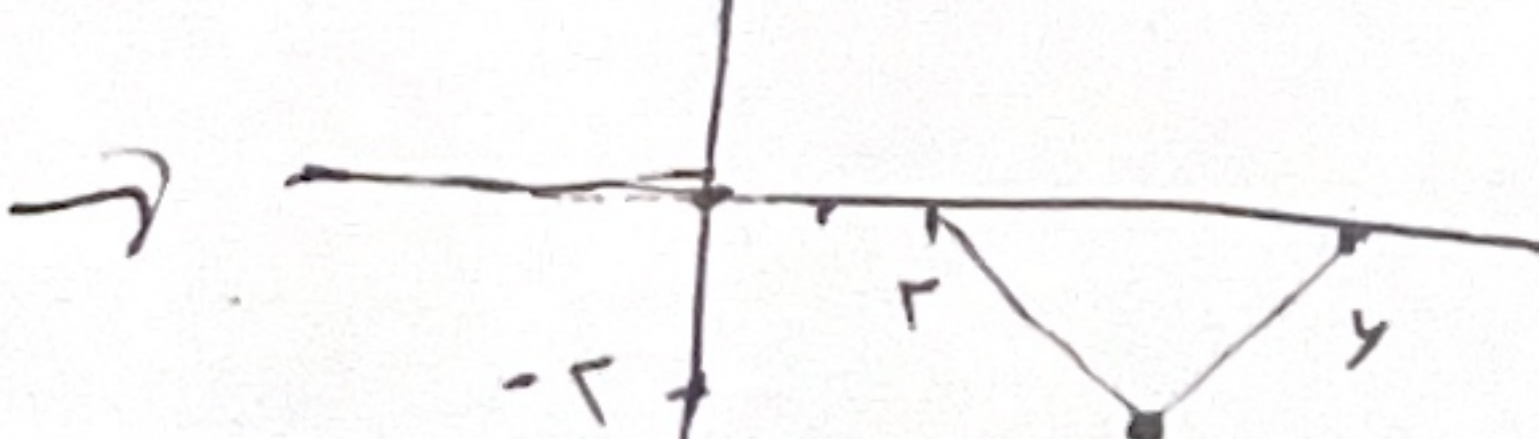
$$\Rightarrow a-2 = 2a+1-1 \Rightarrow a = 2 \checkmark$$



$$f(x-2)$$

$$f(x)$$

$$f(x+2)$$



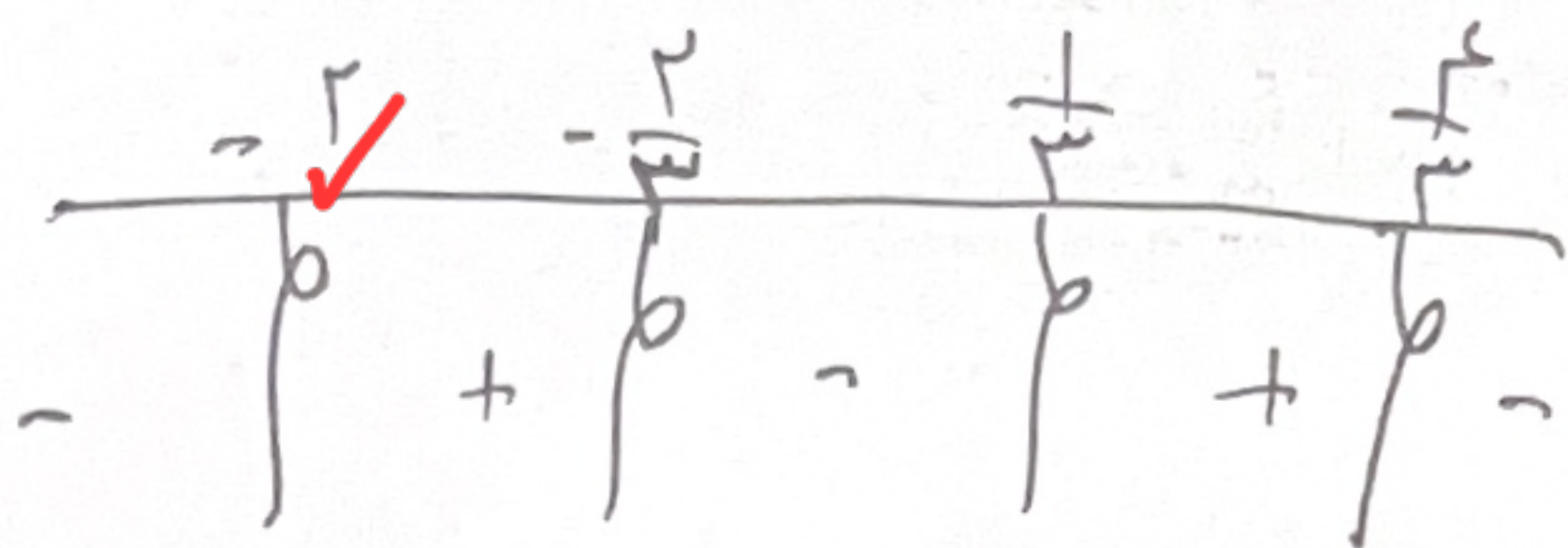
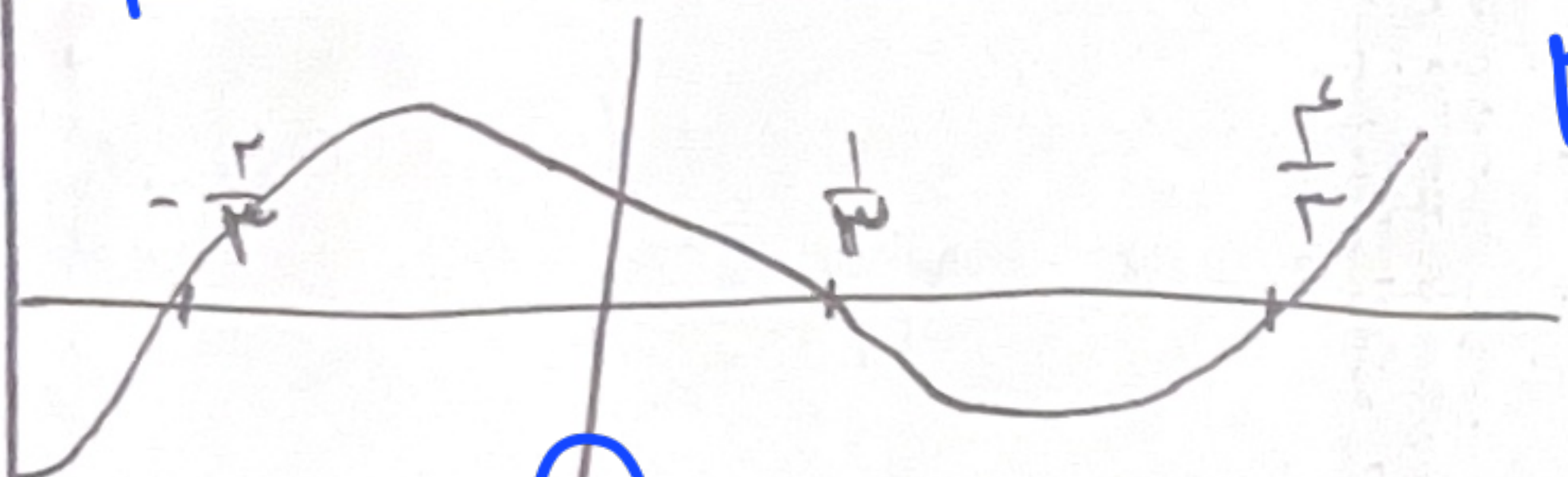
$$f(-x+2)$$

$$\frac{1}{2} f(2-x)$$

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$$\begin{array}{ccccccc} - & 1 & & 1 & & 1 & \\ \hline \phi & + & \phi & - & \phi & + & \phi \end{array}$$

$$\begin{aligned} \mu_{n-1} &= \omega \rightarrow a = 1 \\ \mu_{n-1} &= 1 \rightarrow a = 1 \\ \mu_{n-1} &= -1 \rightarrow a = \end{aligned}$$



$$D_f = [-1, 0] \cup [1, 2]$$

$$\Rightarrow D_f = [-1, -\frac{1}{2}] \cup [\frac{1}{2}, 2]$$

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$$g(x) = |x(n+k) - 3| - 1$$

$$f(x) = 1$$

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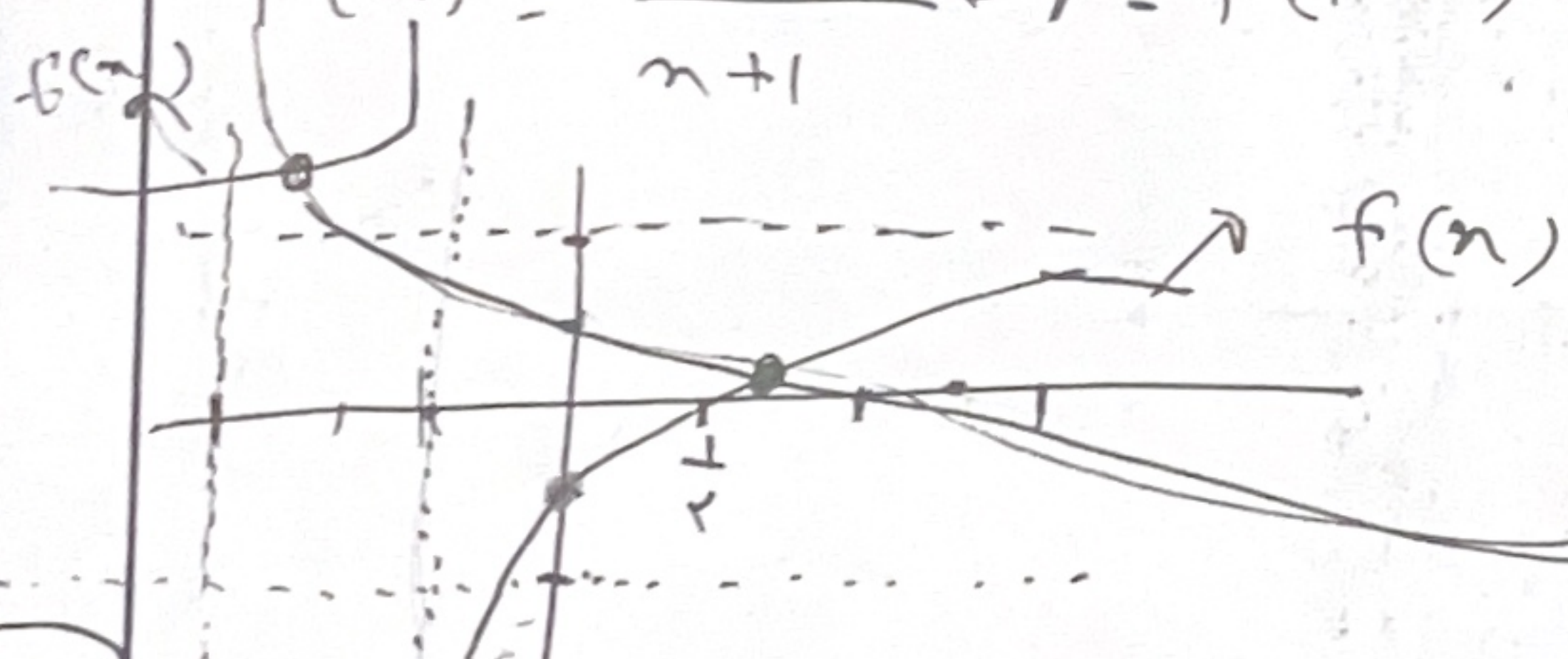
$$g(x) = |xk - 3| - 1 = 1$$

$$|xk - 3| = 2 \Rightarrow k = \frac{5}{x}$$

$$\Rightarrow |xk - 3| = 2 \Rightarrow$$

$$-xk + 3 = 2 \Rightarrow k = -\frac{1}{x}$$

$$f(x) = \frac{x-1}{x+1} \rightarrow -f(x) = \frac{1-x}{x+1} \rightarrow -f(\frac{x}{x}) = \frac{1-x}{x+1}$$



جانب $-f(\frac{x}{x})$ به $\frac{1}{x}$ و $\frac{1}{x}$ به $f(\frac{x}{x})$ می رسد و نقطه تقاطع کن

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$$-f(\frac{x}{x}) + 1 = |x| - 1$$

$$-f(\frac{x}{x}) = |x| - 2$$

$$f(x) = 1 - |x|$$

$$f(x-1) = 1 - |x-1|$$

$$\begin{aligned} 1 - |x-1| &= 1 \\ -|x-1| &= 0 \\ |x-1| &= 0 \\ x-1 &= 0 \\ x &= 1 \end{aligned}$$



$$\frac{(\frac{1}{x} - \frac{1}{x}) \times 1}{1} = \frac{0}{1} = 0$$

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$$\begin{aligned} x &= \frac{1}{x} \\ x &= \frac{1}{x} \end{aligned}$$

$$\frac{(a-1)^2}{2} + \frac{1 \times 1}{2} = \frac{9}{2} \Rightarrow (a-1)^2 = 8 \Rightarrow a = \sqrt{8} + 1$$

$$f(\frac{1}{x}) = \frac{1}{x}$$

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$$(a-1) = \omega \Rightarrow a-1 = \pm \sqrt{\omega} \Rightarrow a = \sqrt{\omega} + 1$$

$$\frac{1}{a} = \frac{1}{\sqrt{\omega} + 1} \Rightarrow \frac{\sqrt{\omega} - 1}{\omega - 1} = \frac{\sqrt{\omega} - 1}{\omega - 1}$$

$$\Rightarrow f(\sqrt{\omega} - 1) = |\sqrt{\omega} - 1 - \sqrt{\omega} + 1| - 1 = 0$$