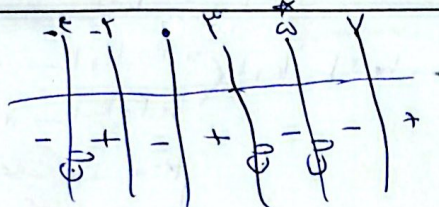


$$\begin{cases} x = y-1 \rightarrow y = x+1 \rightarrow y = \frac{x+1}{3} \\ x = -y^2 \rightarrow y^2 = -x \rightarrow y = \pm\sqrt{-x} \end{cases}$$

$$y = 1 \rightarrow x < 1$$

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$$g(x) = \frac{x f(x-2)}{f(x)} \rightarrow x-2 < 0 \rightarrow x < 2$$

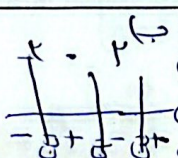


$$D_g = (-2, 0) \cup (2, 4) \cup (6, +\infty)$$

۲

$$\frac{x^2 - x_{n+2}}{x^2 - x_n}$$

$$\frac{x^2 - x_{n+2}}{x^2 - x_n}$$



$$\frac{x^2 - x_{n+2}}{x^2 - x_n}$$

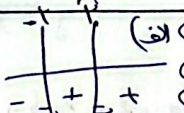
$$x(x-2)(x+2) \neq 0 \rightarrow D_f = \mathbb{R} - \{0, 2, -2\}$$

$$D_g = (-2, 0) \cup (2, +\infty)$$

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$$\sqrt{\frac{x-2}{x^2 - x_n - 1}}$$

$$\frac{x-2}{x^2 - x_n - 1}$$



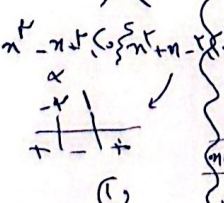
$$x-2 \neq 0 \rightarrow x \neq 2$$

$$x^2 - x_n - 1 \neq 0 \rightarrow x \neq \frac{1 \pm \sqrt{1+x_n}}{2}$$

$$D_g = \mathbb{R} - \{2, \frac{1 \pm \sqrt{1+x_n}}{2}\}$$

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$$f(x) = \frac{\sqrt{|x-1|-x^2}}{|x-1|} \rightarrow |x-1|-x^2 \geq 0 \rightarrow |x-1| \geq x^2$$

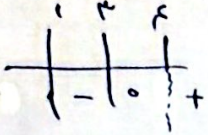
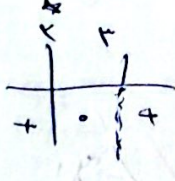


$$f(x) = \frac{\sqrt{|x-1|-x^2}}{|x-1|}$$

$$|x-1| \geq x^2 \rightarrow |x-1| \geq 0 \rightarrow |x-1| \neq 0 \rightarrow x \neq 1$$

$$D_{f(x)} = [0, +\infty)$$

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$y = \sqrt{1-x} [x+2]$  $D = [1, +\infty)$	(-) $y = \sqrt{1-x} [x+2]$ $[x+2] = 0$ $[x+2] = -2$ $x \in \mathbb{R}$  $D = \mathbb{R}$ (ان)	6
$ x+1 - k = 0 \Rightarrow \begin{cases} x+1 - k = k \rightarrow x+1 = 2k \\ x+1 - k = -k \rightarrow x+1 = 0 \end{cases}$ $\begin{cases} x+1 = 2k \rightarrow x = 2k-1 \\ x+1 = -2k \rightarrow x = -2k-1 \\ x+1 = 0 \rightarrow x = -1 \end{cases}$	$\begin{cases} x+1 = k+1 \rightarrow x = k \\ x+1 = -k-1 \rightarrow x = -k-2 \\ x+1 = k-1 \rightarrow x = k-2 \\ x+1 = -k+1 \rightarrow x = -k \end{cases}$ $k=0 \rightarrow x = -1$ $k=1 \rightarrow x = 0$ $k=1 \rightarrow x = -2$	7
$f(x) = \frac{x^2 + x + 1}{x^2 + x + 1}$ $\frac{x+1}{x-1} \neq 0 \quad x \neq 1$	$\frac{x+1}{x-1} \neq 0 \quad x \neq 1$ $x \neq -1, 1$	8
$y = \log \log \frac{1}{x}$ ① $x \neq 1$ ② $x+1 > 0 \rightarrow x > -1$ ③ $x+1 \neq 0 \rightarrow x \neq -1$	$\log \frac{1}{x} > 0 \rightarrow x < 1$ ④ $x < 1$ ⑤ $x > -1$ ⑥ $x \neq -1$ ⑦ $x < 1$	9
$-a \leq x \leq a \Rightarrow -\frac{1}{x} \leq \frac{1}{x} \leq \frac{1}{a} \Rightarrow$ $\frac{1}{x} \leq \frac{1}{a} \Rightarrow x \geq a$	$\frac{1}{x} \leq \frac{1}{a} \Rightarrow x \geq a$	10