

$$n - \varepsilon > 1, n-1$$

$$n - 1, n+1, \Rightarrow n - \varepsilon n - n + 1, \Rightarrow$$

$$\Rightarrow (n-1)(n-1) > (n-1)(n+1)$$

$$\frac{-\varepsilon}{-1+1} \Rightarrow \frac{-\varepsilon}{0} \Rightarrow \infty$$

$$f(x) \leq 1, \quad 1 \leq x \leq -1, \quad f(n) = n-1$$

$$1) f(1) \Rightarrow 11 \checkmark$$

$$2) f(n-1) \Rightarrow 1, \Rightarrow 1, n-1$$

$$\frac{a^2}{a-1} \leq 1$$

$$\Rightarrow a^2 \leq a-1 \Rightarrow a^2 - a + 1 \leq 0 \Rightarrow a \leq 1$$

$$1) f \circ f^{-1} = \{(0,0), (1,1), (2,2), (3,3)\} \checkmark$$

$$2) f^{-1} \circ f = \{(0,0), (1,1), (2,2), (3,3)\} \checkmark$$

$$3) f \circ f^{-1} = \{(0,0), (1,1), (2,2), (3,3)\} \checkmark$$

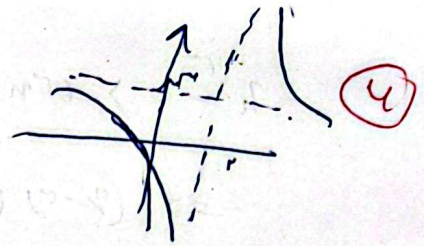
$$4) f^{-1} \circ f = \{(0,0), (1,1), (2,2), (3,3)\} \checkmark$$

$$f \circ g^{-1} = \{(1,1), (2,2), (0,0)\}$$

$$\frac{h}{f \circ g^{-1}} = \{(1, \frac{1}{2}), (2, \frac{1}{2}), (0, \frac{1}{2})\}$$

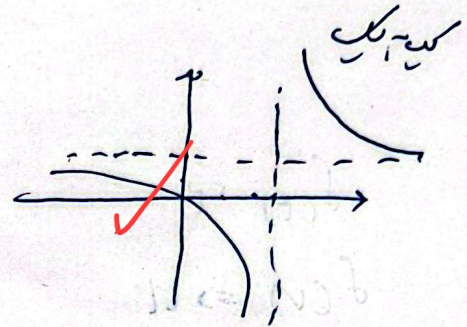
$$\frac{h}{f \circ g^{-1}} = \{(1, \frac{1}{2}), (2, \frac{1}{2})\} \checkmark$$

$$f(n) = \frac{n+1}{n-2} \sim \begin{cases} \text{عبارت} & \frac{a}{c} \\ \text{جانب} & 2 \end{cases}$$



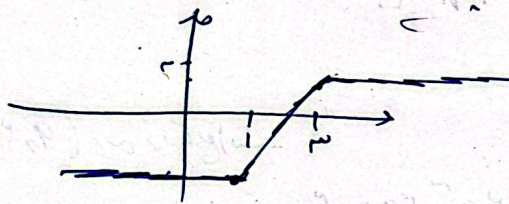
$$f^{-1}(n) = \frac{n+1}{n-3} \sim \begin{cases} \text{عبارت} & \frac{a}{c} \\ \text{جانب} & 3 \end{cases}$$

(4)



یک تابع مرکب است

(1/4)



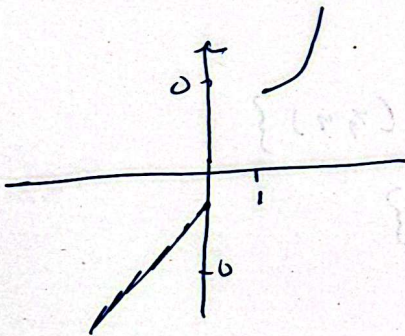
در بازه $[a, b]$ است
 $a \leq x \leq b$

$$f(n) = 2n - 2$$

$$\frac{y+2}{2} = n \Rightarrow$$

$$y \leq \frac{n+2}{2} \quad \checkmark - 1/2 \leq y \leq 1$$

(2)



تابع مرکب است

$$f(n) = \begin{cases} \sqrt{n} & n \geq 4 \\ \frac{1}{2}n & n \leq -1 \end{cases}$$

$$R_{y_1} \leq R_{y_2} \leq R_{y_3} \leq \dots$$

(3)

$$\frac{n^2 + 2n - 1}{n-2} = \frac{-n-1}{n-2} \quad y = \frac{-n-1}{n-2}$$

(5)

$$a < b \Rightarrow f(n) = \frac{-n-1}{n-2}$$

$$\Rightarrow \frac{4n-2}{n+4} = \frac{a+b}{n+4} \Rightarrow \frac{a-4}{b-4} \leq 4$$

$$\frac{a-4}{b-4} \leq 4$$

$$f(n) = \frac{4-1}{-n-2} \leq 0$$

$$y_n^{\text{reg}} - \kappa s_n$$

$$\eta = \frac{1 \pm \sqrt{1 - \varepsilon y_n}}{\varepsilon y_n}$$

$$\Rightarrow y_n < \frac{1 \pm \sqrt{1 - \varepsilon y_n}}{\varepsilon \eta}$$

$$\Rightarrow \frac{1 - \sqrt{1 - \varepsilon y_n}}{\varepsilon \eta}$$

$$\Rightarrow GSE$$

سواء في حالة η أو $\frac{1}{\eta}$

$$\Rightarrow \frac{1 - \sqrt{1 - \varepsilon y_n}}{\varepsilon \eta}$$

$$|\eta| < 1/\eta$$

$1/\eta$

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