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آنها

$$\sqrt{(\sqrt{x-1}+c)^2} + \sqrt{(\sqrt{x-1}-2)^2} = \sqrt{x-1} + 2 + \sqrt{x-1} = 2$$

$$2\sqrt{x-1} \Rightarrow a + b\sqrt{x+c} \longrightarrow a = 0, b = 2, c = -1$$

$$a+b/c = \frac{0+2}{-1} = \frac{2}{-1} = -2$$

$$\frac{n+5}{(n-2)(n-1)} \quad f(2) = -4 \quad f(1) = 0 \quad f(0) = 0 \quad f(-1) = 5/4$$

$$\frac{g}{f} = \left( \left( 2, -\frac{1}{2} \right), \left( 0, 2 \right) \right)$$

$$f(x) = \left\{ \left( \frac{1}{2}, 2 \right), \left( \frac{5}{2}, -1 \right), \left( 2, 2 \right), \left( -\frac{1}{2}, 0 \right) \right\}$$

$$f(x) = \left\{ \left( 1, 0 \right), \left( -1, 2 \right), \left( \sqrt{2}, -1 \right), \left( -\sqrt{2}, -1 \right), \left( 1, 2 \right), \left( -2, 5 \right) \right\}$$

$$f(g(x)+1) = \left\{ \left( -2, 1 \right), \left( 1, 0 \right), \left( 0, 1 \right), \left( -1, 1 \right) \right\}$$

$$f/g = (1, -2), (2, -1)$$

$$-2, 2, 0$$

$$x = -2 \longrightarrow 6$$

$$x = 2 \longrightarrow 5$$

$$x = 0 = 5$$

$$\longrightarrow \left\{ \left( -2, 2 \right), \left( 2, 0 \right), \left( 0, 5 \right) \right\}$$

$$g(x) = [x] + [-x] \rightarrow x \in \mathbb{Z} \\ x \notin \mathbb{Z} \rightarrow -1$$

$$\left( \frac{f}{g+1} \right) x \neq f(x) \quad \sqrt{x-x} = 0 \rightarrow x^2 - 2x = 0$$

$n-2$  در مخرج است

چون  $n \neq 2$  است!

$$\frac{c}{x-1} + D \neq \left\{ 0, 1, 2, 3 \right\}$$

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|                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                            |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---|
| $f(x) = \sqrt{2x^2 - x - 1}$<br>$h(x) = \frac{f(x)}{g(x)} = \{(1,0), (\frac{2+\sqrt{5}}{2}), (2,0)\}$<br>$-(x^2 - 2x + 1) \leq 0 \rightarrow -(x-1)(x-1) \leq 0$                                                                                                                                                                                                                  | 6                                                                                          |   |
| <del><math>g(x) = x^2 - 2x + 1</math></del> $\xrightarrow{\text{فاکتور ساده}} y-1 \leq (x-1)^2$<br>$\sqrt{y-1} \leq x-1 \rightarrow \sqrt{y-1}+1 \leq x$ $R_y = \mathbb{R}$<br>$\rightarrow) \quad x^2 - 2x + (x-1) - 1 \leq 0 \quad (x-1)^2 \geq 0, (x-1)^2 - 1 \leq 0 \Rightarrow [-1, 0] \cup (0, \infty)$<br>$(-\infty, -1] \cup (0, \infty) \leftarrow \text{مقدارهای مثبت}$ | 7                                                                                          |   |
| الف) $\frac{-b}{2a} = -2$ $y \leq 4$<br>$R_f = [4, \infty)$                                                                                                                                                                                                                                                                                                                       | ب) $\frac{-b}{2a} = 12$ $y \leq 144$<br>$R_f = (-\infty, 144]$                             | 8 |
| ج) $\frac{-b}{2a} \leq 2$ $y \leq 0$<br>$R_f = \sqrt{[2, \infty)} = [2, \infty)$                                                                                                                                                                                                                                                                                                  | د) $\sqrt{-2x^2 + 4x}$ $\frac{-b}{2a} \leq 0$<br>$y \leq 9$ $R_f = \sqrt{[0, 9]} = [0, 9]$ | 9 |
| الف) $\mathbb{R}$                                                                                                                                                                                                                                                                                                                                                                 | ب) $\mathbb{R}$                                                                            |   |
| $z \leq \sqrt{R} \leq R^+ \cup \{?\}$                                                                                                                                                                                                                                                                                                                                             | $z \leq (R)^+ = \text{مقادیر نامنفی}$<br>$\rightarrow \text{به عنوان توان}$                |   |
| الف) $R = \{\frac{2}{1}\}$<br>ب) $R = \{\frac{2}{1}\}$                                                                                                                                                                                                                                                                                                                            | 10                                                                                         |   |

$$f(n) = \frac{\sqrt{\sqrt{r}n} - n}{n - r} \rightarrow \begin{cases} n \neq r \\ n \geq 0 \end{cases} \begin{cases} (\sqrt{r}n) \\ \sqrt{r}n - n \geq 0 \rightarrow r \geq n^2 \rightarrow 0 \leq n \leq r \end{cases} \rightarrow Df = [0, r] - \{r\} \quad (\infty)$$

$$g(n) + 1 \neq 0 \rightarrow g(n) \neq -1 \rightarrow [n] + [-n] \neq -1 \rightarrow n \in \mathbb{Z}$$

$$D \frac{f}{g+1} = \left\{ Df \cap Dg, g(n) \neq -1 \right\} = \left\{ 0, 1, r \right\}$$

$\downarrow$   
 $[0, r] - \{r\} \cap \mathbb{Z}$