

$$f(x) = \sqrt{x+1} + \sqrt{x-4} = \sqrt{(\sqrt{x-4}+2)^2} = \sqrt{x-4}+2$$

①

$$g(x) = \sqrt{x-4} - \sqrt{x-4} = \sqrt{(\sqrt{x-4}-2)^2} = \sqrt{x-4}-2$$

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$$f(x) + g(x) = 2\sqrt{x-4} \rightarrow a + b\sqrt{x+c}$$

$$c = -4 \quad a = 0$$

$$b = 2$$

$$(a+1)(a-1)$$

$$\frac{a+b}{c} = -\frac{1}{p}$$

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

$$(2, -\frac{1}{4}) \quad (0, 4)$$

②

$$f(1) = \text{تین}$$

$$f(3) = \text{ن}$$

$$f(0) = \frac{2}{3}$$

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$$f(2x) = (-\frac{1}{4}, 4) \quad (0, 4) \quad (\frac{3}{4}, -4) \quad (2, 2) \quad (1, 1)$$

③

$$f(x^2) = (1, 2) \quad (0, 1) \quad (2, 2) \quad (-1, 1)$$

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$$2g(x) + 1 = (-2, 1) \quad (1, 3) \quad (2, 4) \quad (-1, 1)$$

$$\frac{2f}{g} = (1, -4) \quad (3, 1)$$

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$$\{2, 3, -2\} \leftarrow \text{کینه عترب}$$

④

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$$h(2) = a \quad h(3) = b$$

$$h(4) = c$$

$$(2, a) \quad (3, b) \quad (4, c)$$

$$g(x) = 0$$

$$g(x) = -1 \quad (x \text{ در خارج قیافه نیست})$$

$$x > 0 \quad \sqrt{1-x} - x > 0$$

$$\sqrt{1-x} - x > 0$$

6

$$\sqrt{x} \sqrt{1-x} - x > 0 \quad -1 + \frac{1}{x}$$

$$0 \leq x \leq 1 \quad x \neq 1$$

$$D = \{0, 1, \frac{1}{2}\}$$

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$$-x^2 + 2x - 1 \geq 0 \quad -(x^2 - 1)(x - 1) \geq 0 \quad -\frac{1}{x} + \frac{1}{x^2}$$

$$D_f = \{1, 2, 3, 4\}$$

12

$$h = (1, 0) \text{ و } (2, \sqrt{2}) \text{ و } (4, 0)$$

$$y = (x-1)^2 + 1$$

$$x-1 = \sqrt{y-1}$$

$$R = \mathbb{R}$$

-V

15

$$y = \frac{1}{(x-1)^2 - 1}$$

$$(x-1)^2 - 1 = \frac{1}{y}$$

$$(x-1)^2 = \frac{y+1}{y}$$

18

$$x-1 = \sqrt{\frac{y+1}{y}}$$

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

$$R = (-\infty, 1] \cup (0, +\infty)$$

21

$$\frac{b}{ka} = 1$$

$$R = [4, +\infty)$$

-A

$$\frac{b}{ka} = 3$$

$$\mathbb{R} \setminus (-\infty, 12]$$

ج) $R = [0, +\infty)$ این تابع، اداله لی آه به درستی است ✓

د) $R = [0, 3]$ ✓

الف) $R = \mathbb{R}$ ✓

ب) $R = \mathbb{R}$ ✓

ج) $R = [0, +\infty)$ ✓

د) $R = [0, +\infty)$ ✓

الف) $yx - 2y = 3x + 1$

$R = \mathbb{R} - \{3\}$ ✓

$yx - 2y = 3x + 1$

$y - 2$

$x = \frac{3y+1}{y-2}$ ✓

ب) $yx + y = 2x + 1$ ✓

$R = \mathbb{R} - \{2\}$ ✓

$yx - 2x = 1 - y$ ✓

$x = \frac{1-y}{y-2}$ ✓