

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

(۱)

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

$$f(x) + g(x) = 2\sqrt{x-4} \rightarrow \begin{cases} a=0 \\ b=2 \\ c=-4 \end{cases} \Rightarrow \frac{a+b}{c} = \frac{1}{-2}$$

$$f(x) = \left\{ (2, -1), \left(\frac{5}{2}, \frac{3}{2} \right), \left(\frac{9}{2}, \frac{5}{2} \right), \left(0, \frac{2}{3} \right) \right\}$$

(۱, ۲, ۵) (۲)

$$\frac{g}{f} = \left\{ \left(\frac{2}{3}, \frac{1}{2} \right), (0, 6) \right\} \quad D_f = \mathbb{R} - \{1, 3\} \quad (x^2 - 4x + 3 = 0 \rightarrow x = 1, 3)$$

$$D_f \cap D_g = \{2, 0\} \rightarrow \frac{2}{3} = \left(\frac{2}{3}, \frac{1}{2} \right), (0, 6)$$

$$\text{الف) } \left\{ \left(\frac{1}{2}, 2 \right), \left(\frac{3}{2}, 1 \right), (2, 2), \left(\frac{1}{2}, 5 \right) \right\}$$

دقت!

$$\begin{cases} n^2 = 4 \rightarrow n = \pm 2 \\ n^2 = 1 \rightarrow n = \pm 1 \\ n^2 = 3 \rightarrow n = \pm \sqrt{3} \end{cases}$$

(۱, ۲, ۵)

$$\left\{ \left(\frac{1}{2}, 2 \right), \left(\frac{3}{2}, 1 \right), (2, 2) \right\}$$

$$\text{ج) } \left\{ (-2, 1), (1, 3), (3, 9), (-1, 1) \right\}$$

$$\text{د) } \left\{ (1, -4), (3, -1), \left(\frac{1}{2}, \frac{3}{2} \right) \right\}$$

$$f = \left\{ (2, 2), (3, 2), (-2, 0) \right\} \rightarrow \text{صورتی که نایز باشد}$$

(۱, ۲, ۵)

$$h = \left\{ (2, 5), (3, 5), (-2, 6) \right\}$$

$$f(x) = \begin{cases} \sqrt{x} - x \geq 0 \rightarrow x \leq 1 \\ x \geq 0 \rightarrow x \geq 0 \\ x - 1 \neq 0 \rightarrow x \neq 1 \end{cases}$$

$$= \{x \mid 0 \leq x < 1\}$$

$$\Rightarrow \mathbb{A} = \mathbb{R} \setminus \{0, 1, 2\}$$

$$g(x) \neq -1 \rightarrow x \in \mathbb{Z}$$

$$f(x) = \{(1, 0), (2, \sqrt{2}), (\sqrt{2}, 1), (0, \sqrt{2})\}$$

$$f(2) = \sqrt{2 - 14 - 2} = 0$$

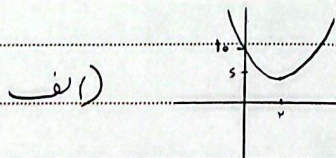
$$h(x) = \{(1, \frac{1}{2}), (2, \frac{\sqrt{2}}{2}), (3, 0)\}$$

$$\text{الف) } y = (x-1)^2 + 1 \rightarrow x-1 = \sqrt[3]{1-y} \rightarrow x = \sqrt[3]{1-y} + 1$$

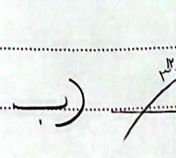
$$\mathbb{R}_f = \mathbb{R}$$

$$\text{ب) } x^2 - 2xy - 1 = 0 \rightarrow \Delta = 4y^2 + 4 \geq 0 \rightarrow x^2 + y \geq 0$$

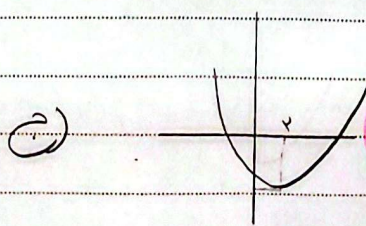
$$\mathbb{R}_f = (-\infty, -1] \cup (0, +\infty)$$



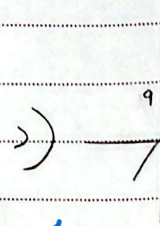
$$\mathbb{R}_f = [1, +\infty)$$



$$\mathbb{R}_f = (-\infty, 1]$$



$$\mathbb{R}_f = [0, +\infty)$$



$$\mathbb{R}_f = [0, 3]$$

آزین نه سئ کسبی ت

الف) $R_f = R$ فرد = بزرگترین توان (الف)

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ب) $R_f = R$ فرد = بزرگترین توان (ب)

ج) $\sqrt{R} \rightarrow R_f = [0, +\infty) = R^+ \cup \{0\}$

د) $R_f = [0, +\infty) \rightarrow k = \frac{1}{2} \rightarrow \{k/k \in R\}$

الف) $R_f = R - \{3\}$

ب) $R_f = R - \{2\}$

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۱۳) $f(x) = \left\{ \left(\frac{1}{2}, 2 \right) \left(\frac{2}{3}, -1 \right) \left(\frac{3}{4}, 2 \right) \left(\frac{4}{5}, -\frac{1}{2} \right) \right\}$ x های f باید تقسیم بر ۲ شوند!

هرگاه از n های f را برابر ۲ قرار دهیم! $f(x) = \left\{ (1, 2) (-1, 2) (\sqrt{3}, -1) (-\sqrt{3}, -1) (2, 2) (-2, 2) \right\}$

این عمل در روی و های و اعمال می شود: $f(x) = \left\{ (1, 2) (3, 2) (5, 2) (7, 2) \right\}$

$\frac{f}{g} = \left\{ (1, \frac{f \cdot 1}{1}) (3, \frac{f \cdot 3}{3}) (-1, \frac{f \cdot (-1)}{-1}) \right\} = \left\{ (1, -2) (3, -1) \right\}$

$Df \rightarrow \Delta n - n^2 - 2 \geq 0 \rightarrow n^2 - \Delta n + 2 \leq 0 \rightarrow 1 \leq n \leq 4$

(14)

$Df \cap Dg = \{1, 2, 3\}$

$\frac{f}{g} = h = \left\{ (1, 0) (2, \sqrt{\frac{2}{3}}) (3, 0) \right\}$