

اینجا بنویس

$$f(m) = \sqrt{(\sqrt{m-2} + 2)^2} = |\sqrt{m-2} + 2|$$

$$g(m) = \sqrt{(\sqrt{m-2} - 2)^2} = |\sqrt{m-2} - 2|$$

$$m \geq 1 \Rightarrow \text{مست} \Rightarrow \sqrt{m-2} + 2 + \sqrt{m-2} - 2 = 2\sqrt{m-2} = \frac{a}{0} + \frac{b}{2} \sqrt{m-2} + \frac{c}{-2}$$

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

$$f(m) \circ$$

$$a=2 \rightarrow \frac{x}{-1} = -x$$

$$a=1 \rightarrow \frac{x}{0} = \infty$$

$$m=3 \rightarrow \frac{0}{0} = \infty$$

$$m=0 \rightarrow \frac{x}{x}$$

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

الف) $m=1 \rightarrow n=\frac{1}{2}$
 $m=2 \rightarrow n=\frac{2}{2}$
 $m=3 \rightarrow n=\frac{3}{2}$
 $m=-1 \rightarrow n=-\frac{1}{2}$

$$f(m) \Rightarrow \left\{ \left(\frac{1}{2}, 2 \right) \left(\frac{2}{2}, 1 \right) \right\}$$

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

ب) $m=1 \rightarrow n=1$
 $m=2 \rightarrow n=\pm\sqrt{2}$
 $m=3 \rightarrow n=\pm 2$
 $m=-1 \rightarrow n=-1$

$$f(m) \Rightarrow \left\{ (1, 2) (-1, 2) (\sqrt{2}, -1) \right\}$$

$$\left(-\sqrt{2}, -1 \right) \left(2, 2 \right) \left(-2, 2 \right) \}$$

ج) $x(3)^2 + 1 = 19$
 $x(-1)^2 + 1 = 3$
 $x(2)^2 + 1 = 9$
 $x(0)^2 + 1 = 0$

$$\Rightarrow \left\{ (-6, 1) (1, 3) \right\}$$

$$\left(3, 9 \right) \left(-1, 1 \right) \}$$

د) $f = \{(1, 2) (3, -2) (4, 2) (-1, 2)\}$
 $\Rightarrow \frac{f}{g} = \{(1, 2) (3, -1)\}$
 $\left(-1, \frac{2}{0} \right)$

$$h(2) = 2f(2) + g(2) = 2 + 3 = 5$$

$$h(3) = 2f(3) + g(3) = 2 + 3 = 5$$

$$h(-2) = 2f(-2) + g(-2) = 0 + 4 = 4$$

$$h = \{(2, 5) (3, 5) (-2, 4)\}$$

$$f(m) : m \geq 0$$

$$\Rightarrow D_f = [0, 3] - \{2\}$$

$$D_g = R \quad g(m) + 1 \rightarrow$$

فقط اعداد صحیح درست است اعداد غیر صحیح صفر را حذف کنید.

$$\sqrt{m-2} \geq 0 \quad m-2 \neq 0$$

$$\sqrt{m-2} \geq 0 \Rightarrow 0 \leq m-2 < 3$$

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$$m-2 \geq 0 \Rightarrow 0 \leq m-2 < 3$$

$$\Rightarrow \{0, 1, 3\}$$

$f_{(a)}^0$ $a=1 \rightarrow 0$ $a=2 \rightarrow \sqrt{2}$ $a=3 \rightarrow 0$ $a=4 \rightarrow \sqrt{-4} \times$	$\Rightarrow h_{(a)} = \{(1,0) (\sqrt{2}, \sqrt{\frac{2}{2}}) (3,0)\}$			6
الف) $y = a^3 - 3a^2 + 3a - 1 + 1$ $y = (a-1)^3 + 1$ $(a-1)^3 = y-1$ $a-1 = \sqrt[3]{y-1}$ $a = \sqrt[3]{y-1} + 1$ $\Rightarrow R = \mathbb{R}$	ب) $ya^2 - y^2a - 1 = 0 \quad y \neq 0$ $a = \frac{y \pm \sqrt{(-y)^2 - 4(y)(-1)}}{2y}$ $\Rightarrow R = (-\infty, -1] \cup (0, +\infty)$ $\varepsilon y^2 + \varepsilon y \geq 0$ $\varepsilon y(y+1) \geq 0 \quad \frac{-1}{+1-1+}$			7
الف) $\min \left \frac{b}{a} - \frac{\varepsilon}{r} \right = 2$ $\varepsilon - 1 + 1 = 2$ $\Rightarrow [4, +\infty)$	ب) $\max \left \frac{-4}{-r} \right = 3$ $-9 + 11 + 3 = 12$ $(-\infty, 12]$	ج) $\min \left \frac{2}{-V} \right $ $\Rightarrow \sqrt{[-V, +\infty)}$ $\Rightarrow [0, +\infty)$	د) $\max \left \frac{3}{q} \right $ $\Rightarrow \sqrt{(-\infty, 9]}$ $\Rightarrow [0, 3]$	8
الف) $\Rightarrow R = \mathbb{R}$ برای همه ی قسمت های سوال	ب) $R = \mathbb{R}$	ج) $\sqrt{R}$ $\Rightarrow [0, +\infty)$	د) R^2 $\Rightarrow [9, +\infty)$	9
الف) $R - \{ \frac{9}{c} \}$ $\Rightarrow R - \{ 3 \}$	ب) $R - \{ \frac{9}{c} \}$ $= R - \{ 3 \}$			10