

$$2g - 3f =$$

$$2g = (-1, 2), (0, 8), (1, 2)$$

$$3f = (1, 0), (-1, 0)$$

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$$\{-1, 1\} = \text{جواب}$$

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

$$f(x) = \sqrt{1-x^2} = -1 \rightarrow x=0 \quad f(x) = \sqrt{1-x^2} = 0 \rightarrow x=1$$

$$f(x) = \sqrt{1-x^2} = 1 \rightarrow x=0 \quad f(x) = \sqrt{1-x^2} = x \rightarrow x=1$$

$$D_f = \{(-1, 1), (1, 1), (0, 0)\}$$

$$D = \{-1, 1\}$$

$$2 + 1 + 0 = 11$$

$$f(x) = 2x - 1 \rightarrow D_f = [3, +\infty)$$

$$R_f = [0, +\infty)$$

$$g(x) = \frac{1}{x}x + 3 \rightarrow D_g = (-\infty, 3]$$

$$R_g = (-\infty, 3]$$

$$f, g \rightarrow \mathbb{R} - (3, \infty)$$

$$y = -\frac{1}{x}x^2 - x + 3$$

$$x_0 = \frac{-1}{2(-\frac{1}{x})} = 1$$

$$y_0 = -\frac{1}{1} - 1 + 3 = \frac{1}{2}$$

$$(-\infty, \frac{1}{2}) \quad \frac{y}{x} \rightarrow (a, b) \rightarrow (\frac{1}{2}, \frac{1}{2})$$

$$\sqrt{\frac{y}{x}} = \sqrt{\frac{1}{2}}$$

$$\frac{-x^2 + 2x + 3}{x} > \frac{1}{x} \rightarrow x^2 - 2x - 3 < 0$$

$$\rightarrow -kx < k$$

$$\rightarrow \sqrt{b-a} = 1$$

$$y = |x-1| + |x-3| + |2x+2|$$

$$x=1 \rightarrow y=4$$

$$x=3 \rightarrow y=12$$

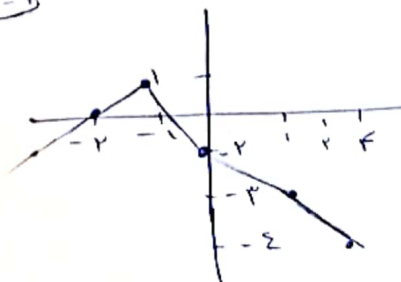
$$x=-2 \rightarrow y=2$$

$$1-2x \quad -2x+4 \quad 2x-5 \quad 2x-1$$

$$R = [1, +\infty)$$

$$y = |x| - 2|x+1| \rightarrow x = -1$$

$$f(x) = \begin{cases} -x-2 & x > 0 \\ -x-2 & -1 < x < 0 \\ x+2 & x < -1 \end{cases}$$



$$R = (-\infty, 1]$$

$$y = \frac{x^2 + \omega x + m}{x+1} \rightarrow \frac{x^2 + \delta x + \epsilon}{(x+1)(x+2)} \quad y = x+2 \quad R_f = \mathbb{R}$$

$$x^2 + (\omega - y)x + m - y = 0 \rightarrow x = \frac{y - \omega \pm \sqrt{(\omega - y)^2 - 4(m - y)}}{2} \rightarrow y = \frac{M \pm \sqrt{M^2 - 4N}}{2}$$

$$\Delta y \rightarrow 1 > 0$$

$$\Delta x \rightarrow m < f \rightarrow$$

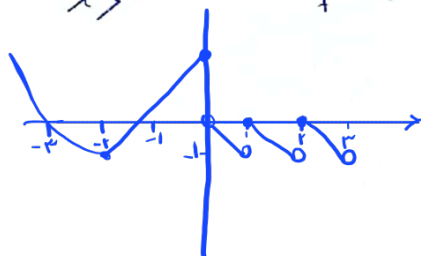
مفروضه باطل است

$$m = 4, 5, 6$$

$$f(x) = \begin{cases} x+2 & x \geq 3 \\ x^2 - 2x + 2 & 0 \leq x < 3 \\ |x| + 2 & x < 0 \end{cases} \quad \xrightarrow{\text{نقطه نریز}} [1, +\infty)$$

$$f(x) = \begin{cases} x^2 + 5x + 3 & x \leq 0 \\ [5x] - 2x & x > 0 \end{cases} \quad R_f = (-1, 0] \cup [3, +\infty)$$

$$-1 \leq [5x] - 2x \leq 0$$



$$R = [-1, +\infty)$$

$$y = a + 1 - \sqrt{2x + 3}$$

$$D_f = [b, +\infty) \quad R_f = (-\infty, a]$$

$$b = \frac{r}{r} \quad a = f$$

$$ab = -4$$

$$a - \sqrt{2b + 3} = f$$

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

مفروضه باطل است

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$$\sqrt{x} \cdot \frac{1}{\sqrt{x}} = 1 = a \times b$$

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

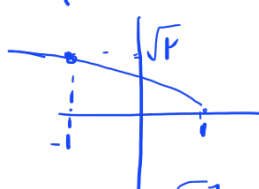
$$D_f = D_g$$

$$f(m) + g(m) = \sqrt{m+1} + \sqrt{1-m}$$

$$g(\sqrt{1-2x} + \sqrt{1+x}) \rightarrow \sqrt{1-2x} + \sqrt{1+x}$$

$$\rightarrow g(x) = \sqrt{1+2x} - \sqrt{1-2x}$$

$$\frac{f(x)}{4} - \frac{g(x)}{r} = \sqrt{1-2x}$$



$$R = [-1, \sqrt{2}]$$