

لباسمین نوروزی - یازدهم پسر B - تالیف شماره ۱

$$\left. \begin{array}{l} D_f = [-1, 1] \\ D_g = \{-1, 0, 1, 2\} \end{array} \right\} \rightarrow = \{-1, 0, 1\}$$

$$\begin{array}{l} g(-1) = 1 \\ g(0) = 4 \\ g(1) = 2 \end{array} \quad \left\{ \begin{array}{l} f(-1) = 0 \\ f(0) = 1 \\ f(1) = 0 \end{array} \right. \rightarrow \begin{array}{l} 2g - 3f = 2 \\ \quad \quad \quad = 5 \\ \quad \quad \quad = 4 \end{array}$$

$$\Rightarrow 2g - 3f = \{(-1, 2), (0, 5), (1, 4)\} \Rightarrow \text{مجموع اعضای} \text{ به تابع} = 5 + 2 + 4 = 11$$

$$f \rightarrow R_f = [f(2) - 1, +\infty) = [5, +\infty) / g \rightarrow R_g = (-\infty, \frac{1}{2}(3) + 3] = (-\infty, 4] / R_f \cup R_g = \mathbb{R} - (4, 5)$$

$$\frac{1}{x}x^2 + x + 3 > \frac{3}{x} \rightarrow -x^2 + 2x + \frac{3}{x} - 3 > 0 \rightarrow \frac{-x \pm \sqrt{x^2 + 12}}{-x} \rightarrow \begin{array}{l} 3 \rightarrow b \\ -1 \rightarrow a \end{array} \left\{ \begin{array}{l} \sqrt{3 - (-1)} = \sqrt{4} = 2 \end{array} \right.$$

$$y = |x - 1| + |x - 3| + |2x - 4| \Rightarrow \begin{array}{c} 1 \quad 2 \quad 3 \\ -x+1 \quad -x+3 \quad 2x-4 \end{array} \Rightarrow \begin{array}{c} 1 \quad 2 \quad 3 \\ -x+1 \quad -x+3 \quad 2x-4 \end{array}$$

۱, ۵ $\rightarrow x - 1 - x + 3 - 2x + 4 = -2x + 6 \rightarrow 0 \rightarrow -x + 1 - x + 3 - 2x + 4 = -4x + 8 \rightarrow 0$
 ۳, ۵ $\rightarrow x - 1 - x + 3 + 2x - 4 = 2x - 2 \rightarrow 0 \rightarrow x - 1 - x + 3 + 2x - 4 = 2x - 2 \rightarrow 0$

$$\begin{vmatrix} -2 & -1 & 0 & 1 \\ 0 & 1 & -2 & -3 \end{vmatrix} \rightarrow R_f = (-\infty, 1]$$

از آنجایی که درجه یک پس از دیویدیم:

$$y^2 + y = x^2 + 5x + m \Rightarrow x^2 + (5 - y)x + (m - y) = 0 \Rightarrow \Delta \geq 0 \Rightarrow (5 - y)^2 - 4(m - y) \geq 0$$

$$\rightarrow y^2 - 10y + 25 + 4y - 4m = y^2 - 6y + 25 - 4m \geq 0 \rightarrow \frac{6 \pm \sqrt{36 - 4(25 - 4m)}}{2} \Rightarrow \Delta \leq 0 \Rightarrow \frac{36 - 100 + 16m}{-4} \geq 0$$

$$\rightarrow 16(4 - m) \leq 0 \rightarrow m \leq 4$$

از آنجایی که سازه کن دامنه را تعیین می دهد و در نتیجه
 برای هم تعیین می کنند پس باید حواسمان باشد باعث نشود $x + 1$ مربع ساده شود $\rightarrow$ با استفاده $m = 4$ مربع خطی خود را پس جواب $\{1, 2, 3\}$

$$\begin{array}{l} x = 3 \rightarrow y = 5 \\ x = -1 \rightarrow y = 3 \end{array} \Rightarrow R_f = [1, +\infty)$$

۱, ۵ $\rightarrow x^2 - 2x + 2 \Rightarrow \frac{-b}{2a} = \frac{1}{1} = 1$
 $x = 1 \rightarrow y = 1$

$$x^2 + 4x + 3 \xrightarrow{\text{مربع کامل}} \frac{-b}{2a} = \frac{-4}{2} = -2 \rightarrow x = -2 \rightarrow y = 1$$

$$\xrightarrow{x=0} y = 3$$

$$[x] - 2x \xrightarrow{[t] - t} R_f = (-1, 0]$$

$$\Rightarrow R_f = [-1, +\infty)$$

$$2x+3 \geq 0 \Rightarrow x \geq -\frac{3}{2} \Rightarrow \boxed{b = -\frac{3}{2}} \Rightarrow D_f = \left[-\frac{3}{2}, +\infty\right)$$

(9)

$$R_f \rightarrow \text{بشترین مقدار } \left(\sqrt{2x+3}\right) = \text{کمترین مقدار } \left(\sqrt{2x+3}\right) = 0 \Rightarrow R_f = (-\infty, a+1] \Rightarrow a+1 = 5 \Rightarrow \boxed{a = 4}$$

$$\Rightarrow ab = (-6)$$

$$D_f \Rightarrow \left. \begin{array}{l} x+1 \geq 0 \rightarrow x \geq -1 \\ 1-x \geq 0 \rightarrow x \leq 1 \end{array} \right\} = [-1, 1] = D_g / D_g = 3\sqrt{x+2\sqrt{1-x^2}} - 2\sqrt{x+1} - 5\sqrt{1-x}$$

(10)

$$\begin{aligned} \frac{f(x)}{g} - \frac{g(x)}{3} &= \frac{2\sqrt{x+1} + 5\sqrt{1-x}}{6} - \frac{3\sqrt{x+2\sqrt{1-x^2}} - 2\sqrt{x+1} - 5\sqrt{1-x}}{3} = \frac{\sqrt{x+1}}{3} + \frac{2\sqrt{1-x}}{3} - \frac{3\sqrt{x+2\sqrt{1-x^2}}}{3} + \frac{2\sqrt{x+1}}{3} \\ &+ \frac{5\sqrt{1-x}}{3} = \frac{4\sqrt{1-x}}{3} + \frac{3\sqrt{x+1}}{3} - \frac{3\sqrt{x+2\sqrt{1-x^2}}}{3} = 2\sqrt{1-x} + \sqrt{x+1} - \frac{\sqrt{x+2\sqrt{1-x^2}}}{\sqrt{(\sqrt{x+1} + \sqrt{1-x})^2}} \\ &= 2\sqrt{1-x} + \sqrt{x+1} - \sqrt{x+1} - \sqrt{1-x} = \boxed{\sqrt{1-x}} \end{aligned}$$

⊕ همواره

$\boxed{\sqrt{1-x}} \xrightarrow{1 \geq x} D = [-1, 1]$

$\xrightarrow{1 \geq x} R = [\sqrt{2}, 0] = \boxed{[0, \sqrt{2}]}$