

نام و نام خانوادگی: علی ربان

پاسخنامه تکلیف شماره: ۸

کلاس یازدهم: ۲۵

$$2g - 2f = ? =$$

۱- (۲)

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

$$g(x) = \{(-1, 1)(0, 0)(1, 0)(2, 0)\}$$

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

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

$$2g - 2f = \{(-1, 2)(0, 1)(1, 0)\} \quad 2+1+0 = 3$$

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

$$D_f = [x, +\infty)$$

$$R_f \cup R_{f_g} = (-\infty, 4] \cup [0, +\infty)$$

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

$$D_g = (-\infty, 0]$$

$$R_g = (-\infty, 4]$$

۲- (۲)

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

(a, b)

۳- (۲)

$$-\frac{x^2}{2} + x + 2 > \frac{x}{2} \quad -\frac{x^2}{2} + x + \frac{x}{2} > 0 \quad -x^2 + 2x + x > 0 \quad x^2 - 2x - x < 0$$

$$\sqrt{b-a} = \sqrt{x^2 - 1} = \sqrt{x^2} = x$$

$$(x+1)(x-2) < 0$$

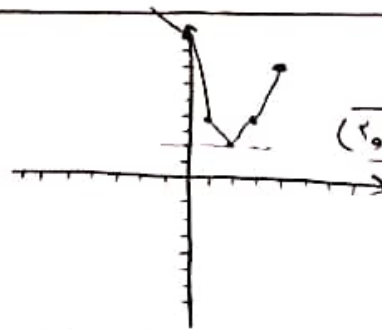
$$\frac{-1}{+} \frac{2}{-} \quad (-1, 2)$$

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

$$x=1 \Rightarrow y=4$$

$$x=2 \Rightarrow y=4$$

$$x=3 \Rightarrow y=2$$



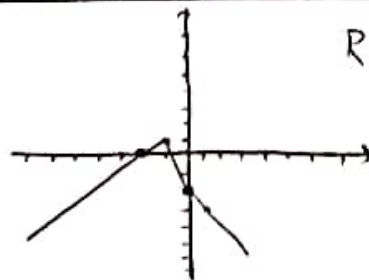
(2, 2) = min $\rightarrow y=2$ کسب می شود

۴- (۲)

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

$$x=0 \Rightarrow y=3$$

$$x=-1 \Rightarrow y=1$$



$$R_f = (-\infty, 0]$$

۵- (۲)

$$y = \frac{x^2 + dx + m}{x+1}$$

$$yx + y = x^2 + dx + m$$

$$x^2 + dx - yx + m - y = 0$$

$$x \neq -1$$

$$x^2 + (d-y)x + (m-y) = 0$$

$$x = \frac{-(d-y) \pm \sqrt{(d-y)^2 - 4(m-y)}}{2} \Rightarrow -1 \neq \frac{y-d \pm \sqrt{y^2 - 2y + d^2 - 4m}}{2} \Rightarrow y-d \pm \sqrt{y^2 - 2y + d^2 - 4m} \neq -2$$

$$(\sqrt{y^2 - 2y + d^2 - 4m})^2 \neq (-y+2)^2 \Rightarrow y^2 - 2y + d^2 - 4m \neq y^2 - 4y + 4 \Rightarrow 2d - 4m \neq 4 \Rightarrow m \neq \frac{d-2}{2}$$

$$(d-y)^2 \geq 4m - 4y \Rightarrow y^2 - 10y + 25 \geq 4m - 4y \Rightarrow y^2 - 6y + 25 \geq 4m \Rightarrow \left| \frac{y}{2} \right| \leq \frac{1}{2} \Rightarrow \begin{cases} 1 \geq \frac{1}{2} \\ \frac{1}{2} \geq m \end{cases}$$

$$\{1, 2, 3\} = m \text{ اعداد طبیعی} \Leftarrow m = (-\infty, 4)$$

۶- (۲)

$$R_f = [1, +\infty) \quad \checkmark$$

$$\frac{1}{1} = 1$$

$$R_D = [-1, 2)$$

$$R_{\textcircled{R}} = (-1, 0)$$

$$\xrightarrow{V} R_f = [-1, +\infty) \quad \checkmark$$

$$ab = 8 \cdot \frac{1}{2} = 4 \quad \checkmark$$

$$a_{n+1} - \sqrt{2} \leq 0$$

$$R_f = (-0.92)$$

$$\alpha - \sqrt{\kappa_2 \alpha} \leq \varepsilon$$

۱۰ حاکم و

$$9 \cdot 10^3 = 9000 \quad 9 = 3^2 \quad \checkmark$$

$$f(x) + g(x) - f(x) = g(x)$$

$$2\sqrt{2}\sqrt{1-z^2} - (2\sqrt{2+1} + 2\sqrt{1-1}) = g(z)$$

$$D_f = D_g \Rightarrow D_f = \left\{ \begin{array}{l} \sqrt{1-x} \Rightarrow -1 \leq x \rightarrow x+1 \geq 0 \quad x \leq 1 \\ \sqrt{1-x} \Rightarrow x \leq 1 \rightarrow 1-x \geq 0 \quad x \leq 1 \end{array} \right\} \rightarrow D_f = [-1, 1]$$

$$\sqrt{\sqrt{1+2} + \sqrt{1-2} + \sqrt{1-2}} = \sqrt{\sqrt{1+2} + \sqrt{1-2}} - \sqrt{2+1} - \sqrt{1-2} = \sqrt{1+2} + \sqrt{1-2} - \sqrt{2+1} - \sqrt{1-2} = 0$$

$$\frac{f(z)}{g} - \frac{g(z)}{z} =$$

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

$$\frac{f(z) - g(z)}{\gamma} = \frac{\sqrt{z+1} + \sqrt{1-z} - \sqrt{z+1} + \sqrt{1-z}}{\gamma} = \frac{\sqrt{1-z}}{\gamma} = \sqrt{1-z} \quad \text{as } \sqrt{1-z} = -\sqrt{z+1}$$

$$\Rightarrow R_f = [0, \sqrt{\epsilon}] \quad \checkmark$$