نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ..... کلاس .....

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

$f = \{(-1,0)(0,3)(\cancel{2})(1,0)\}$

$\Rightarrow 2g - 3f_2 \{(-1,2)(0,\omega)(1,\epsilon)\}$

$Dg \cap f = \{-1, 0, 1\}$ $\quad R_{f_2}$ مجموع $2+\omega+\varepsilon = 11$

$R_{f_1} \Rightarrow 2\times 3 - 1 = \omega \Rightarrow [\omega, +\infty)$

$g(x) \to R_g = \frac{1}{2}\times 2 + 2 = \varepsilon \Rightarrow (-\infty, \varepsilon]$

$R_{g \cup f} \Rightarrow (-\infty, 4] \cup [\omega, +\infty) = \mathbb{R} - (\varepsilon, \omega)$

$\frac{-x^2}{2} + x + 2 > \frac{3}{2} \to \left(\frac{-x^2}{2} + x + \frac{3}{2}\right) > 0 \Rightarrow (-x^2 + 2x + 3 > 0)^{\times -1}$

$\Rightarrow x^2 - 2x - 3 < 0$

$x = 3, x = -1$

-1		3
$+$	$-$	$+$

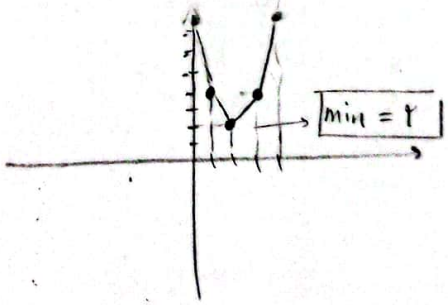
$a = -1$

$b = 3 \to (-1, 3)$

$\sqrt{b-a} = \sqrt{3-(-1)} = 2$

$x = 1 \quad x = 1 \quad x = 2$

1		2		3	
$-4x+8$		$-2x+4$		$2x-2$	$4x-8$
4	↘	2	↗	2	↗ 4



$x = 0 \quad x = -1$

-1		0	
$x+2$	$-2x-2$		$-x-2$
1	↘ -2	↗	-2 ↘ -3

$R_f = (-\infty, 1]$

$yx + y = x^2 + 5x + m$

$x^2 + (5-y)x + m - y = 0$

$x = \dfrac{y-5 \pm \sqrt{(5-y)^2 - 4(m-y)}}{2}$, $\geq 0 \Rightarrow$

$(5-y)^2 - 4(m-y) \geq 0$

$25 + y^2 - 10y - 4m + 4y \geq 0$

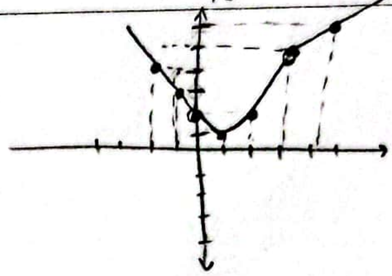
$y^2 - 6y + 25 - 4m \geq 0$ 6

$\Delta < 0 \Rightarrow \begin{cases} 36 - 4(25 - 4m) < 0 \\ 36 - 100 + 16m < 0 \to 16m < 64 \to m < 4 \end{cases}$

$a > 0$ ✓

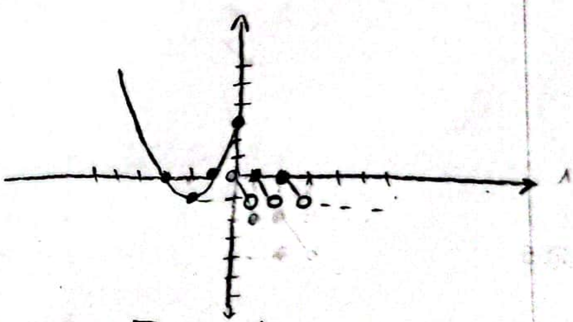
سه عدد $m = \{1, 2, 3\}$

$\begin{cases} x+2 & \begin{array}{c|c|} x & 3 & 4 \\ y & 5 & 6 \end{array} \\ x^2 - 2x + 2 & \begin{array}{c|c|c|c|} x & 0 & 1 & 2 & 3 \\ y & 2 & 1 & 2 & 5 \end{array} \\ |x| + 2 & \begin{array}{c|c|c|} x & 0 & -1 & -2 \\ y & 2 & 3 & 4 \end{array} \end{cases}$



$R_f = [1, +\infty)$ 7

$\begin{cases} x^2 + 4x + 3 & \begin{array}{c|c|c|c|} x & 0 & -1 & -2 & -3 \\ y & 3 & 0 & -1 & 0 \end{array} \\ [2x] - 2x = 2x([\square]) - \square \leq 0 \end{cases}$



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

$2x + 3 \geq 0 \to 2x \geq -3 \to \underbrace{x \geq -\frac{3}{2}}_{D_f} \Rightarrow b = -\frac{3}{2}$

برای برد عدد صفر تعداد پس $\to a + 1 = 5 \to a = 4 \Rightarrow ab = 4 \times -\frac{3}{2} = \boxed{-6}$ 9

$x + 1 \geq 0 \to x \geq -1$

$-x \geq 0 \to x \leq 1 \to D_f = [-1, 1] \to f(1) = 2\sqrt{2} \quad f(-1) = 4\sqrt{2} \quad f(0) = 6$

$f(1) + g(1) = 3\sqrt{2 + 2\sqrt{1 - (1)^2}} \Rightarrow g(1) = 3\sqrt{2} - 2\sqrt{2} = \sqrt{2}$

$f(-1) + g(-1) = 3\sqrt{2 + 2\sqrt{1 - (-1)^2}} \to g(-1) = 3\sqrt{2} - 4\sqrt{2} = -\sqrt{2}$ 10

$y(1) = \frac{3\sqrt{2}}{1} - \frac{\sqrt{2}}{3} \ldots = 0$

$y(-1) = \frac{4\sqrt{2}}{4} - \frac{\sqrt{2}}{3} = \sqrt{2}$ حاصل $\to \boxed{R_y = [0, \sqrt{2}]}$