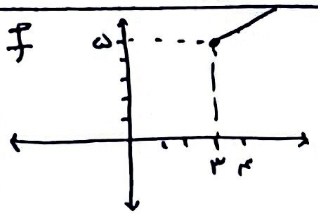
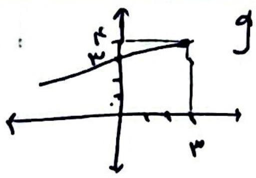
نام و نام خانوادگی: زهرا سادات حسینی   پاسخنامه تشریحی تکلیف شماره ۸ ... کلاس یازدهم دختر B

$f(x) \to -x^2+1 \geq 0 \to x^2 \leq 1 \to -1 \leq x \leq 1 \to D_f \to D_f \cap D_g = \{-1, 0, 1\}$

$2g-3f = \{(-1,2), (0, 8-3=5), (1,4)\} \to R = \{2,4,5\} \to 2+4+5 = 11$ ۱

f


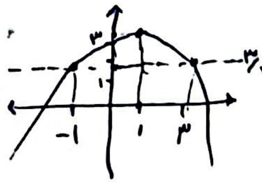
g


$\Rightarrow \begin{cases} R_f = [5, +\infty) \\ R_g = (-\infty, 4] \end{cases} \xrightarrow{\cup} \mathbb{R} - (4,5)$ ۲

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

$-\frac{b}{2a} = 1 \to y_s = -\frac{1}{2} + 1 + 3 = \frac{7}{2}$

$\Rightarrow \sqrt{b-a} = \sqrt{3+1} = 2$ ۳

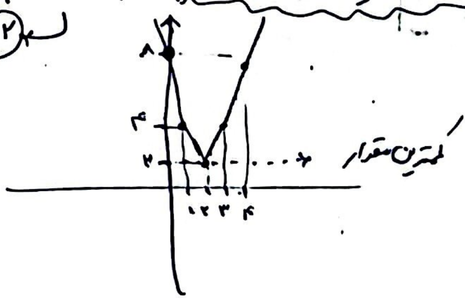


$\to x = 3 \to y = \frac{3}{2}$

$x = -1 \to y = \frac{3}{2}$ $\to (a,b) = (-1, 3)$

$y = |x-1| + |x-3| + |2x-4|$ {کمترین مقدار به ازای $x=2$ $= 2$}

(ریشه‌ها: ۱، ۳، ۲)



$x = 1 \to 2+2 = 4$

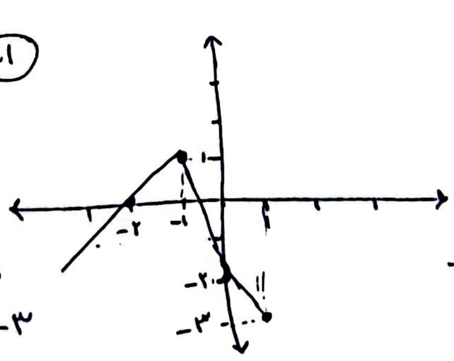
$x = 3 \to 2+2 = 4$ ۴

$x = 2 \to 1+1 = 2$

$x = 0 \to 1+3+4 = 8$

$y = |x| - 2|x+1|$ (ریشه‌ها: ۰ ، ۱-)

$x < -1$	$-1 < x < 0$	$x > 0$
$-x+2x+2 = x+2$	$-x-2x-2 = -3x-2$	$x-2x-2 = -x-2$



$x = 0 \to -2 = y$

$x = -1 \to y = 1$

$x = -2 \to y = 2-2 = 0$ ۵

$x = 1 \to y = 1-4 = -3$

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

$y=\frac{x^2+5x+m}{x+1} \to yx+y = x^2+5x+m \to x^2+(5-y)x+m-y \to \Delta \geq 0$

$(5-y)^2-4(m-y)\geq 0 \to y^2-10y+25-4m+4y \geq 0 \to y^2-6y+25-4m \geq 0$ [illegible] 6

$\to \Delta \leq 0 \to 36-4(25-4m)\leq 0 \to 36-100+16m \leq 0 \to 16m-64 \leq 0 \to 16m \leq 64 \to m \leq 4$

$\to \frac{x^2+5x+4}{x+1} = \frac{(x+1)(x+4)}{x+1} = x+4 \to \mathbb{R}-\{3\} \to m \neq 4 \to m=1,2,3 \to$ به ازای ۳ مقدار عدد طبیعی [illegible]

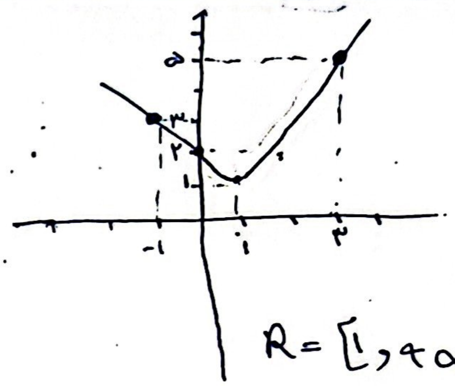
$f(x)\begin{cases} x+2 \,;\, x\geq 3 \\ x^2-2x+2 \,;\, 0\leq x<3 \\ |x|+2 \,;\, x<0 \end{cases}$ 7

$x=3 \to 5=y$

$x=0 \to y=2$

$x=-1 \to y=3$

$x=1 \to y=1$



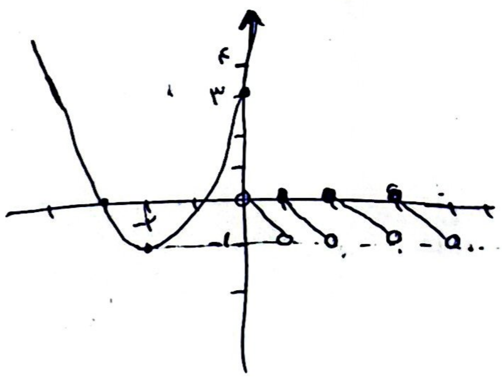
$R=[1,+\infty)$

$f(x)\begin{cases} x^2+4x+3 \,;\, x\leq 0 \\ [2x]-2x \,;\, x\geq 0 \end{cases}$ 8

$\to \frac{-b}{2a} = \frac{-4}{2} = -2$

$\to 4-8+3=-1$

$[2x]-2x$: $y=(-1,0]$



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

$2x+3\geq 0 \to 2x\geq -3 \to x\geq -\frac{3}{2} \to [-\frac{3}{2},+\infty) \to b=-\frac{3}{2}$

$\xrightarrow{x=-3/2} a+1=5 \to a=4$ 9

$ab=-\frac{3}{2}\times 4=-6$

$g(x)=3\sqrt{2+2\sqrt{1-x^2}}-2\sqrt{x+1}-4\sqrt{1-x} \xrightarrow{\frac{f(x)-2g(x)}{6}} \frac{2\sqrt{x+1}+4\sqrt{1-x}-6\sqrt{2+2\sqrt{1-x^2}}}{6}$

$\frac{+4\sqrt{x+1}+8\sqrt{1-x}}{} = -\sqrt{2+2\sqrt{1-x^2}}+2\sqrt{1-x}+\sqrt{x+1} = \sqrt{(\sqrt{x+1}+\sqrt{x-1})^2}+\sqrt{x+1}$ 10

$+2\sqrt{1-x} = -\sqrt{x+1}-\sqrt{x+1}+\sqrt{x+1}+2\sqrt{1-x} = \sqrt{1-x} \to R=[0,+\sqrt{2}]$

$D_f\cap D_g=[-1,1]$