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نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۷ ... کلاس .....

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

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

$-1 \quad 1$

$-\ +\ -$

$D_f=[-1,1]$

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

$3+5+3=11$

$3f-g=\{(-1,2),(0,5)(1,3)\}$

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

$g(x)=\frac{1}{2}x+2 \quad D_g=(-5,3)$

$R_f+R_g=?$ $\quad (-\infty,3]\cup[5,+\infty)$

$[5,+\infty)$

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$y=\frac{-x^2}{2}+x+3 \quad R_y \rightarrow (a,b)\rightarrow(\frac{3}{2},+\infty)$

$\frac{-x^2}{2}+x+3>\frac{3}{2}$

$-x^2+2x+3>3$

$-(x^2-2x-3)>0$

$-(x-3)(x+1)>0$

$-1 \quad 3$

$-\ +\ -$

$\max\sqrt{b-a}$

$\sqrt{3-(-1)}=\sqrt{4}=2$

$a=-1 \quad b=3 \quad (-1,3)\rightarrow$ طول رأس

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$y=?$ (Min.)

$y=|x-1|+|x-3|+|2x-4|$

$1 \quad 2 \quad 3$

$-2x+7 \quad -3x+9 \quad 5x-7$

$\min y=2$

x	0	1	2	3	4
y	6	4	3	4	7

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$R_y=$ برد $\quad y=|x|-2|x+1|$

$R_y=(-\infty,1]$

$-1 \quad 0$

$x+2 \quad -2x-2 \quad -x-2$

x	-2	-1	0	1
y	0	1	-2	-3

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$x^2+(5-y)x+m-y=0$ $\quad x=\frac{y-5\pm\sqrt{(5-y)^2-4m+4y}}{2} \to y^2-10y+25-4m+4y$

$y^2-6y+25-4m \xrightarrow{\Delta\le 0} 36-4(25-4m)\le 0 \to 16m\le 64$ $\quad y^2-6y+25-4m\ge 0$

$m<4 \to \{1,2,3\}$ $\quad m\le 4$

$R-\{-1\} \leftarrow \quad x^2+5x+4 \xrightarrow{m=4} \frac{(x+1)(x+4)}{x+1}$

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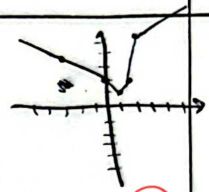
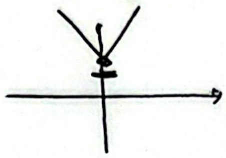
$f(x)=\begin{cases} x+2 & x\ge 3 \\ x^2-2x+2 & 0\le x\le 3 \\ |x|+2 & x<0 \end{cases}$

$R_1=[5,+\infty)$ $\quad$ x: 3, 4 ; y: 5, 6

$y=(x-1)^2+1 \to S\,|\,^1_1$





$R_{y_2}=[2,+\infty)$

x: 3, 0 ; y: 5, 2 $\qquad$ x: 0, −1 ; y: 2, 3

$R_f=[1,+\infty)$

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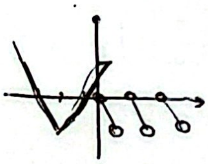
$f(x)=\begin{cases} x^2+4x+2 & x\le 0 \to S\,|\,^{-2}_{-1} \\ [2x]-2x & x>0 \to R_2(-1,0] \end{cases}$



$R_1=[-1,\infty)$

$R_1\cup R_2=[-1,+\infty)$

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

$D_g=[b,+\infty)$ $\quad R_f=2x+3\ge 0 \to x\ge -\frac{3}{2} \to \boxed{b=-\frac{3}{2}}$

$R_y=(-\infty,5]$

$y_{max} \longrightarrow \sqrt{2x+3} \to min \to \sqrt{2x+3}\to 0$ $\quad x=-\frac{3}{2}$

$ab=?$

$(-\frac{3}{2})\times 4=-6$ $\quad y=a+1=5$ $\quad y=5$ $\quad \boxed{a=4}$

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$f(x)=2\sqrt{x+1}+4\sqrt{1-x}$ $\quad x+1\ge 0\to x\ge -1$ $\quad x\in[-1,1]$

$f(x)+g(x)=3\sqrt{2+2\sqrt{1-x^2}}$ $\quad 1-x\ge 0\to x\le 1$

$D_f=D_g$ $\quad f(1)=2\sqrt{2},\ f(-1)=4\sqrt{2}$ $\quad f(0)=6$

$R_y=?$ $\quad y=\frac{f(x)}{6}-\frac{g(x)}{3}$

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

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

$y(1)=\frac{2\sqrt{2}}{6}-\frac{\sqrt{2}}{3}=0$

$R_y=[0,+\sqrt{2}]$ $\quad y(-1)=\frac{4\sqrt{2}}{6}-\frac{-\sqrt{2}}{3}=\frac{6\sqrt{2}}{6}$