نام و نام خانوادگی: کیمیا رحمی ۱۸,۷۵ شماره پاسخنامه: 8 دفتر A
با کیفیت تر عکس ارسال شود

1

$f(x)=\sqrt{1-x^2} \to f(x)=+1, 0 \Rightarrow f(x)=\{(0,1),(1,0),(-1,0)\}$

$g=\{(-1,1),(0,4),(2,0),(1,2)\}$

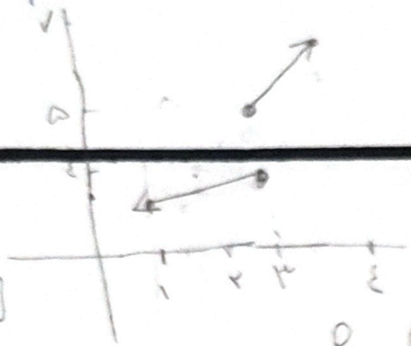
$\Rightarrow 2g-3f \Rightarrow \{(0,5),(1,4),(-1,2)\}$

$0,1,-1 \to 8-3=5$

$4-0=4$

$2-0=2$

$\Rightarrow$ ۱۱ نوع



2

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

$g(x)=\frac{1}{3}x+3 \to D_f=(-\infty,+3]$

$\frac{3}{2}+\frac{7}{2}=\frac{9}{2}=4{,}5$

$-\frac{1}{2}+\frac{9}{2}=\frac{8}{2}=4{,}5$ $\quad 2x-1=\frac{5}{2}$ $\quad 2x-1=\frac{1}{3}x+3$

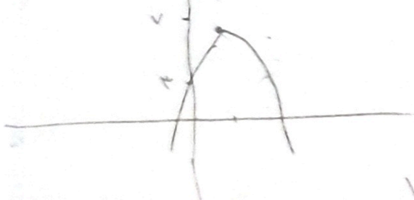
$2x=\frac{7}{2}$ $\quad x=\frac{7}{4}$ $\quad \frac{4}{3}x-\frac{1}{3}x=4$

$R_f=(-\infty,4]\cup[5,+\infty)$

3

$y=-\frac{x^2}{2}+x+3$ $\quad -x^2+x+6 \to 1-4(-1)(6)=1+24=25$ $\quad \frac{-1\pm5}{-2}$

$\Delta=1-4(-\frac{1}{2})(3)=1+6=7 \to \frac{-\Delta}{4a}=\frac{-7}{-2}=3{,}5$ $\quad \frac{-b}{2a}=\frac{-1}{-1}=1$



$-\frac{x^2}{2}+x+3 \geqslant \frac{3}{2} \to -x^2+2x+6\geqslant 3$

$-x^2+2x+3\geqslant 0 \to x^2-2x-3\leqslant 0$

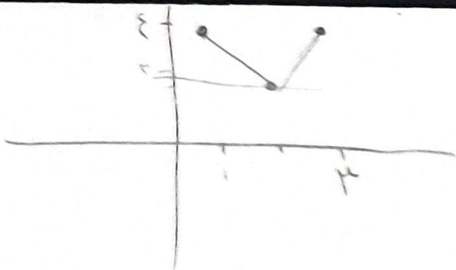
$\sqrt{3+1}=\boxed{2}$ $\quad =\frac{-1 \quad 3}{}$ $\quad (-1,3)$ $\quad (x-3)(x+1)\leqslant 0$

4

$x=1 \longrightarrow 0+2+2=4$

$x=3 \longrightarrow 2+2=4$

$x=2 \longrightarrow 1+1+0=2$



$Min=2$

5

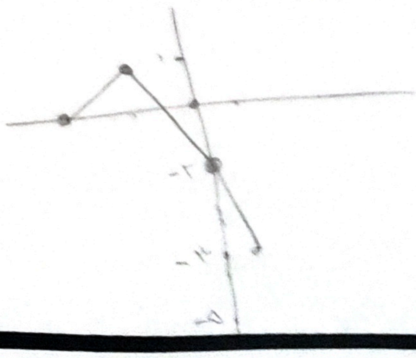
$-1 \quad 0$

$-x-2x+2 \mid -3x+2 \mid x-2x-2$

$+x+2 \quad 3x-2 \quad -x-2$

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

$+2x+2$ $\quad -x-2(x+1)$



$R_f=(-\infty,1]$

$y = \frac{x^2+5x+m}{x+1} \longrightarrow$

$m=4 \to \frac{x^2+5x+4}{x+1} = x+4,\ \frac{x \neq -1}{\text{تعریف نشود}}$ در تابع IR

۱,۷۵

$(x+1)$

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

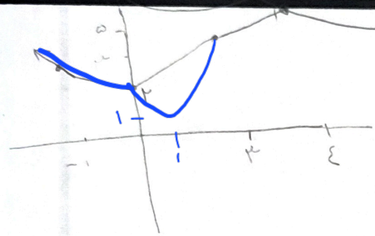
$x^2-(y-5)x - y - m = 0 \Rightarrow y^2-10y+25-4(1)(y-m)$

$y^2-14y+4m+25 \leftarrow y^2-10y+25-4y+4m$

$\Delta \geq 0 \to 196-100-16m \leq 0$

$\boxed{m \leq 4}$

$1, 2, 3, 4 = m$



$R_f = (\cancel{2}, +\infty)$ ۱

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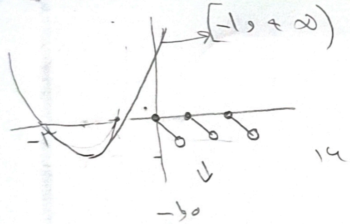

$[-1, +\infty)$

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

$16-4(1)(4) = 0 \quad \frac{-4}{4} = -1$

$\frac{-4}{2} = -2$

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$y = ax+1-\sqrt{2x+3} \Rightarrow 2x+3 \geq 0 \to 2x \geq -3 \to x \geq -\frac{3}{2}$

$b = -\frac{3}{2} \Rightarrow y = a+1-\sqrt{0} \Longrightarrow 5-1 = a \Rightarrow a = 4$

$ab = 4^2 \times -\frac{3}{5} = -6$

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$\frac{f(x)+2g(x)}{4} = y \Rightarrow 3f(x) - 4\sqrt{1x+1x\sqrt{1-x^2}} \to \sqrt{x+1} + 4\sqrt{1-x} - \sqrt{2(\ldots}$

$g(x) = \sqrt{1x-1x\sqrt{1-x^2}} - f(x) \quad D_y = [-1, 1] \to \text{Min } f(x) \xrightarrow{x=0} 0$

$\text{Max} \xrightarrow{x=1} \sqrt{2}$

$R_y = [0, \sqrt{2}]$

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