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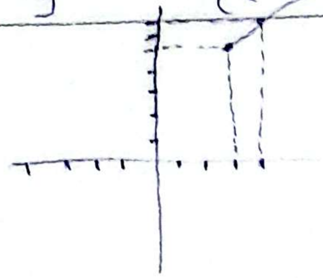
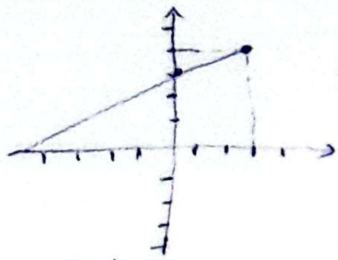
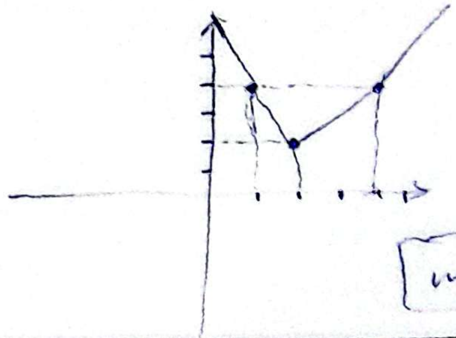
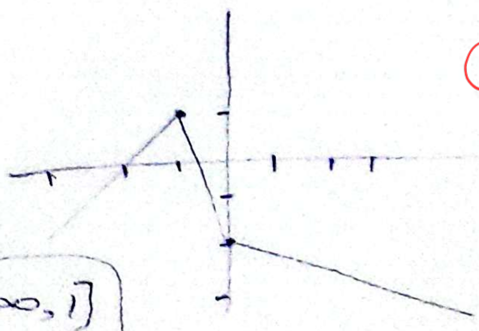
نام و نام خانوادگی ...[illegible]... پاسخنامه تشریحی تکلیف شماره ...۸... کلاس ...یازدهم ریاضی B...

۱	$2g=\{(-1,2),(0,8),(2,0),(1,4)\}$ $D_f \Rightarrow 1-x^2\geq 0 \quad 1\geq x^2 \quad -1\leq x\leq 1$ $f=\{(-1,0),(0,1),(1,0)\}$ $3f=\{(-1,0),(0,3),(1,0)\}$ $2g-3f=\{(-1,2),(0,5),(1,4)\}$ مجموع برد $=2+5+4=\boxed{11}$ ۴
۲	 $R_f=[5,+\infty)$  $R_g=(-\infty,4]$ $R_f\cup R_g=(-\infty,4]\cup[5,+\infty)$ ۴
۳	$-\frac{x^2}{2}+x+3>\frac{3}{2} \Rightarrow -\frac{x^2}{2}+x>-\frac{3}{2} \Rightarrow \frac{x^2}{2}-x-\frac{3}{2}<0$ $\xrightarrow{\times 2} x^2-2x-3<0 \Rightarrow (x+1)(x-3)<0$ $\begin{array}{c\|ccccc} x & & -1 & & 3 & \\ \hline & + & 0 & - & 0 & + \end{array}$ ج $\Rightarrow (-1,3)$ $\sqrt{b-a}=\sqrt{3-(-1)}=\sqrt{4}=\boxed{2}$ ۴
۴	برابر ۱ $\rightarrow x=1 \longrightarrow y=4$ ۲ $\rightarrow x=3 \longrightarrow y=4$ ۳ $\rightarrow x=2 \longrightarrow y=2$  $\boxed{\min=2}$ ۴
۵	$y=\|x\|-2\|x+1\|$ $\begin{array}{ccccc} & -1 & & 0 & \\ -x+2x+2 & & -x-2x-2 & & x-2x-2 \\ \downarrow & & \downarrow & & \downarrow \\ x+2 & & -3x-2 & & -x-2 \end{array}$  $R_f=(-\infty,1]$ ۴

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

$\Rightarrow b^2-4ac \geq 0 \Rightarrow (5-y)^2 - 4(m-y) \geq 0 \Rightarrow 25+y^2-10y-4m+4y \geq 0$ ۶

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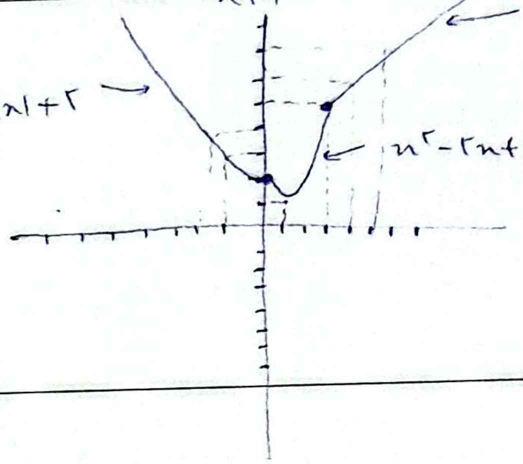
$\Rightarrow y^2-6y+(25-4m) \geq 0 \Rightarrow \overbrace{36-100}^{-64}+16m \leq 0 \Rightarrow 16m \leq 64$

$m \neq 4 \rightarrow \frac{x^2+5x+4}{x+1} = x+4 \text{ if } x \neq -1 \quad R_f \neq \mathbb{R} \Rightarrow m \leq 4$

$\boxed{m = \{1, 2, 3\}}$



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$R_f = [1, +\infty)$ ۷

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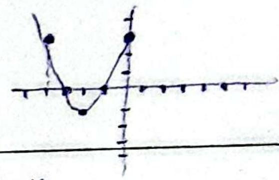
$f(x) = \begin{cases} x^2+4x+3 & x \leq 0 \rightarrow R = [-1, +\infty) \\ [2x]-2x & x > 0 \rightarrow R = \{0\} \end{cases} \rightarrow R_f = [-1, +\infty)$ ۸



$0 \leq \bigcirc - [\bigcirc] < 1$

$-1 < [\bigcirc] - \bigcirc \leq 0$

$\sqrt{2x+3} \quad 2x+3 \geq 0 \quad 2x \geq -3 \quad x \geq -\frac{3}{2}$

$\boxed{b = -\frac{3}{2}} \qquad [-\frac{3}{2}, +\infty)$

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اگر $x = -\frac{3}{2} \rightarrow y = 5$

$5 = a+1 - \sqrt{2 \times -\frac{3}{2} + 3} \quad \boxed{a = 4}$

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

$g(x) = 2\sqrt{2+2\sqrt{1-x^2}} - f(x) \quad , \quad y = \frac{f(x)}{2} - \sqrt{2+2\sqrt{1-x^2}} + \frac{f(x)}{2}$

$\Rightarrow \frac{1}{2} f(x) - \sqrt{2+2\sqrt{1-x^2}} \Rightarrow \frac{1}{2}(2\sqrt{x+1} + 2\sqrt{1-x}) - \sqrt{2+2\sqrt{1-x^2}}$ ۲ ۱۰

$\Rightarrow y = \sqrt{x+1} + 2\sqrt{1-x} \Rightarrow -\sqrt{2+2\sqrt{1-x^2}} \Rightarrow -1 \leq x \leq 1$

$\boxed{R = [0, \sqrt{2}]}$