نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ...۱... کلاس .....

۱

$y=(a-1)x^2+x+3$

$\frac{-b}{2a}=2 \quad \frac{-1}{2a-2}=2 \quad 4a-4=-1 \quad a=\frac{3}{4}$

$y=-\frac{1}{4}x^2+x+3 \quad -\frac{1}{4}x^2+x+3=0 \quad -x^2+4x+12=0$

$-(x-4)(x+2)=0 \quad x=4$

۲

$f(x)=mx^2-5x+m$

$\Delta>0$

$25-4m^2>0$

$(5-2m)(5+2m)>0$

$m=\pm\frac{5}{2}$

	$-\frac{5}{2}$		$\frac{5}{2}$	
	−	+	+	−

$(-\frac{5}{2},\frac{5}{2})$ (II)

$m<0$ (I)

$m\in(I)\cap(II)=(-\frac{5}{2},0)$

۳

$S=\frac{3-\sqrt{5}}{3}+\frac{3+\sqrt{5}}{3}=\frac{6}{3}=3$

$P=\frac{3-\sqrt{5}}{3}\times\frac{3+\sqrt{5}}{3}=\frac{4}{9}$

$x^2-Sx+P=0$

$x^2-3x+\frac{4}{9}=0$

۴

$2x^2-8x+m+2=0 \quad 2\alpha^2=8\alpha-m-2$

$2\alpha^2+\beta^2-12$

$S=\alpha+\beta=\frac{8}{2}=4 \quad P=\frac{m+2}{2}$

$2\alpha^2+\alpha^2+\beta^2=12$

$8\alpha-m-2+16-m-2=12$

$8\alpha=2m \quad \alpha=\frac{m}{4} \quad \beta=\frac{\frac{m+2}{2}}{\frac{m}{4}}=\frac{2m+4}{m}$

$S=\frac{m}{4}+\frac{2m+4}{m}=\frac{m^2+8m+16}{4m}=4$

$m^2-8m+16=0 \quad (m-4)^2=0 \quad m=4$

۵

$y=a(x-2)^2+9 \xrightarrow{(1,0)} 0=a+9 \quad a=-1$

$y=-x^2+4x+5 \longrightarrow -x^2+4x+5>0$

$-(x-5)(x+1)>0$

	$x=-1$		$x=5$	
	−	+	+	−

$\Rightarrow(-1,5)$

$\alpha x^2 - 5x + 9\beta = 0 \quad S = \alpha+\beta = \frac{5}{\alpha} \rightarrow \beta = -\frac{\alpha^2+5}{\alpha}$

$x=\beta$

$\alpha\beta^2 - 5\beta + 9\beta = \alpha\beta^2 + 4\beta = \beta(\alpha\beta+4) = 0$ $\begin{cases} \beta = 0 \ \times \\ \alpha\beta = -4 \end{cases}$

$\frac{-\alpha^2+5}{9} \times \alpha = -\alpha^2+5 = -4 \quad \alpha^2 = 9 \quad \alpha = \pm 3$

$\beta = \frac{-4}{-3} = \frac{4}{3} \quad \frac{1}{\alpha} + \frac{1}{\beta} = \frac{-1}{3} + \frac{3}{4} = \frac{-4+9}{12} = \frac{5}{12}$

$x^2 + mx - 2m = 0 \quad -m\beta = \beta^2 - 2m$

$\alpha^2 - m\beta = 1$

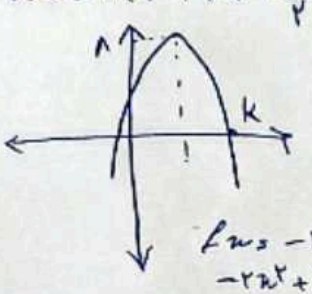
$\alpha^2 + \beta^2 - 2m = 1$

$m^2 + 2m - 2m = 1$

$m^2 + 2m = m(m+2) = 1$ $\begin{cases} m = 0 \ \times \\ m = -2 \end{cases}$

$S = -m = 2$

$f(x) = mx^2 + 4x + \frac{m}{2} + 5$



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

$m\left(\frac{4}{m+2}\right) + 4\left(\frac{-2}{m}\right) + \frac{m}{2} + 5 = \frac{-16+m^2+14m}{2m} = 1 \quad m^2 - 2m - 16 = 0$

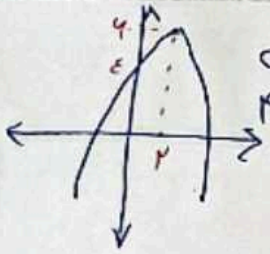
$\frac{-8}{m} + \frac{m}{2} + 5$

$(m-8)(m+2) = 0$

$m = 8 \quad m = -2$ 공통

$f(x) = -2x^2 + 4x + 9, \ x = -1$

$-2x^2 + 4x + 9 = 0 \rightarrow x = 3 = k$



$y = a(x-3)^2 + 4 \quad y = -\frac{1}{2}x^2 + 2x + 4$

$4 = 4a + 4$

$a = -\frac{1}{2}$

$(-2) \ -\frac{1}{2}x^2 + 2x + 8 = 0$

$\therefore x = \frac{4 \pm \sqrt{8a}}{2}$

$x^2 - 4x - 16 = 0 \quad (2+2\sqrt{5}, \ 2-2\sqrt{5})$

$\triangle : 14 + 32 = 46$

$\frac{1}{2+2\sqrt{5}} + \frac{1}{2-2\sqrt{5}} = \frac{2-2\sqrt{5}+2+2\sqrt{5}}{4-20} = \frac{4}{-16} = -2$

$x^2 - (4a+4)x + (2a^2+6a+4) = 0$

$4 - 16a - 16 + 8a^2 + 24a + 8 = 0$

$8a^2 - 8a - 4 = 0 \quad a = \frac{1}{2}$

$a = 1$

$x^2 - 16x + 48 = (x-8)(x-6) = 0 \quad x = 6$