(۱۸)

نام و نام خانوادگی ......هستی جانبازی...... پاسخنامه تشریحی تکلیف شماره ....۱.... کلاس یازدهم ریاضی جایگزین شهدا

$y=(a-1)x^2+x+3$ $\frac{-b}{2a}=2 \quad \frac{-1}{2a-2}=2 \quad 4a-4=-1 \quad a=\frac{3}{4}$ $y=-\frac{1}{4}x^2+x+3 \quad -\frac{1}{4}x^2+x+3=0 \quad -x^2+4x+12=0$ $-(x-6)(x+2)=0 \quad \boxed{x=6}$ (۲)	۱
$f(x)=mx^2-5x+m \quad m\in(I)\cap(II)=(-\frac{5}{2},0)$ $\Delta>0$ $25-4m^2>0$ $(5-2m)(5+2m)>0$ $m=\pm\frac{5}{2}$ $m<0$ (I) $(-\frac{5}{2},\frac{5}{2})$ (II)	۲
$S=\frac{3-\sqrt{5}}{3}+\frac{3+\sqrt{5}}{3}=\frac{6}{3}=2$ $P=\frac{3-\sqrt{5}}{3}\times\frac{3+\sqrt{5}}{3}=\frac{4}{9}$ $x^2-Sx+P=0$ $x^2-2x+\frac{4}{9}=0 \xrightarrow{\times 9}$ ضرایب صحیح (۱)	۳
$2x^2-8x+m+2=0 \quad 2\alpha^2=8\alpha-m-2$ $2\alpha^2+\beta^2=12$ $S=\alpha+\beta=\frac{8}{2}=4 \quad P=\frac{m+2}{2}$ $2\alpha^2+\alpha^2+\beta^2=12$ (S^2-2P) $8\alpha-m-2+16-m-2=12$ $8\alpha=2m \quad \alpha=\frac{m}{4} \quad \beta=\frac{\frac{m+2}{2}}{\frac{m}{4}}=\frac{2m+4}{m} \quad S=\frac{m}{4}+\frac{2m+4}{m}=\frac{m^2+8m+16}{4m}=4$ $m^2-8m+16=0 \quad (m-4)^2=0 \quad m=4$ (۲)	۴
$y=a(x-2)^2+9 \xrightarrow{(1,5)} 5=4a+9 \quad a=-1$ $y=-x^2+4x+5 \longrightarrow -x^2+4x+5>0$ $-(x-5)(x+1)>0$ $x=-1, x=5$: $-\ +\ -$ $\Longrightarrow (-1,5)$ (۲)	۵

$\alpha x^2 - 7x + 9\beta = 0 \qquad S = \alpha+\beta = \frac{7}{\alpha} \rightarrow \beta = \frac{-\alpha^2+7}{\alpha}$

$x=\beta$

$\alpha\beta^2 - 7\beta + 9\beta = \alpha\beta^2 + 2\beta = \beta(\alpha\beta+2) = 0 \quad \begin{cases} \beta = 0 \; \times \\ \alpha\beta = -2 \end{cases}$ (۲) ۶

$\frac{-\alpha^2+7}{\alpha} \times \alpha = -\alpha^2 + 7 = -2 \qquad \alpha^2 = 9 \qquad \alpha = \pm 3$ غ ق

$\beta = \frac{-2}{-3} = \frac{2}{3} \qquad \frac{1}{\alpha} + \frac{1}{\beta} = \frac{-1}{3} + \frac{3}{2} = \frac{-2+9}{6} = \frac{7}{6}$

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

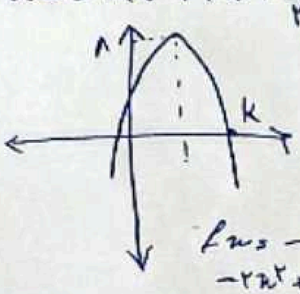
$\alpha^2 - m\beta = 8 \qquad S = -m$

$\alpha^2 + \beta^2 - 2m = 8 \qquad P = -2m$

$m^2 + 4m - 2m = 8 \qquad S = -m = \boxed{2}$ (۲) ۷

$m^2 + 2m = m(m+2) = 8 \quad \begin{cases} m = 2 \; \times \\ m = -4 \end{cases}$

$f(x) = mx^2 + 4x + \frac{m}{2} + 7$



$\frac{-b}{2a} = \frac{-4}{2m} = \frac{-2}{m}$ (۲)

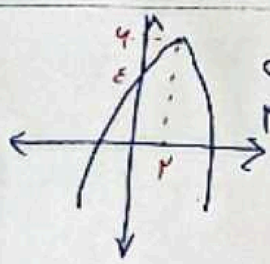
$m\left(\frac{4}{m^2}\right) + 4\left(\frac{-2}{m}\right) + \frac{m}{2} + 7 = \frac{-8+m^2+14m}{2m} = 8 \qquad m^2 - 2m - 8 = 0$ ۸

$\frac{-4}{m} + \frac{m}{2} + 7 \qquad (m-4)(m+2) = 0$

$m = 4 \qquad m = -2$ غ ق

$f(x) = -2x^2 + 4x + 6, \; x = -1$

$-2x^2 + 4x + 6 = 0 \rightarrow \boxed{x = 3} = k$



$y = a(x-2)^2 + 6 \qquad y = -\frac{1}{2}x^2 + 2x + 4$ (۱/۷۵)

$4 = 4a + 6 \qquad (-2) \times -\frac{1}{2}x^2 + 2x + 4 = 0 \qquad x = \frac{4 \pm \sqrt{48}}{2}$

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

$x^2 - 4x - 8 = 0 \qquad (2+2\sqrt{3}\,,\; 2-2\sqrt{3})$ ۹

$\Delta = 16 + 32 = 48$

$\frac{1}{2+2\sqrt{3}} + \frac{1}{2-2\sqrt{3}} = \frac{2-2\sqrt{3}+2+2\sqrt{3}}{4-12} = \frac{4}{-8} = \boxed{-\frac{1}{2}} \rightarrow -\frac{1}{2}$

$x^2 - (4a+4)x + (3a^2+6a+3) = 0$ (۱/۲۵)

$4 - 8a - 8 + 3a^2 + 6a + 3 = 0$

$3a^2 - 2a - 1 = 0 \qquad a = -\frac{1}{3} \rightarrow x \begin{cases} 2 \\ \frac{2}{3} \end{cases}$ ۱۰

$a = 1$

$x^2 - 8x + 12 = (x-2)(x-6) = 0 \qquad \boxed{x = 6}$