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نام و نام خانوادگی ......تینا جابت داوری...... پاسخنامه تشریحی تکلیف شماره ..۲۲.. کلاس ......دهم دختر C پنجشنبه......

$x^2-5x+2=0 \Rightarrow \begin{cases}\alpha^2-5\alpha+2=0\\ \beta^2-5\beta+2=0\end{cases}$ $\alpha^2-5\alpha=\beta^2-5\beta$, $\beta^2=5\beta-2$; $\alpha+\beta=5$, $\alpha\beta=2$ $\frac{4\alpha+\beta^5}{5\beta^2}=\frac{4(5-\beta)+\beta^5}{5\beta^2}=\frac{20-4\beta+\beta^5}{5\beta^2}=\frac{20-4\beta+479\beta-210}{5(5\beta-2)}=\frac{95(5\beta-2)}{5(5\beta-2)}=19$ $\beta^5 \to \beta(105\beta^2-46)=105\beta^2-46\beta=105(5\beta-2)-46\beta$ $\beta^3=\beta(5\beta-2)=5\beta^2-2\beta=5(5\beta-2)-2\beta=23\beta-10$, $\beta^4=\beta(23\beta-10)=23\beta^2-10\beta=23(5\beta-2)-10\beta=105\beta-46$ ۳	۱
x: -1.5, x_s, 3 ; y: -4, -4 $x_s=\frac{3-1.5}{2}=0.75=\frac{x_1+x_2}{2}$ $x_1+x_2=1.5$ ۲	۲
$\frac{\sqrt{\Delta}}{\lvert a\rvert}=\frac{4}{3}k$, $\frac{\sqrt{4k^2-20}}{1}=\frac{4}{3}k$, $4k^2-20=\frac{16}{9}k^2$, $\frac{20}{9}k^2=20$, $k^2=9$ $\left[\frac{k^2}{2}\right]=4$ ۵	۳
$y_s=1$, $\alpha^2+\beta^2=5$; x: -5, x_s, 3 ; y: y, 1, y; $x_s=-1$ ↳ $\frac{3-5}{2}=-1$ $\alpha+\beta=-2$ $\alpha^2+\beta^2=S^2+2P=4+2P=5$, $2P=1$, $P=\frac{1}{2}$; $y=x^2+2x+\frac{1}{2}$, $x=0\Rightarrow y=0.5$ ۵	۴
$-x^2+5x+m=0$, $\Delta>0$, $25+4m>0$, $4m>-25$, $m>\frac{-25}{4}$ (1) α, β, $\frac{9}{2}$: $-$ 0 $+$ 0 $-$ $m=\{-6,-5,-4,-3\}$ به ازای ۴ مقدار صحیح $-\frac{81}{4}+\frac{45}{2}+m<0$, $\frac{9}{4}+m<0$, $m<\frac{-9}{4}$ (2) (1)(2) $\Rightarrow \frac{-25}{4}<m<\frac{-9}{4}$; -6.25, -2.25 ۵	۵

$y = mx^2 - 12x + 5m - 1$ $\frac{-\Delta}{4m} = 2 \quad \Delta = -8m = 144 - 4m(5m-1)$ $-8m = 144 - 20m^2 + 4m$ $20m^2 - 12m - 144 = 0 \quad 5m^2 - 3m - 36 = 0$ کمترین مقدار $\rightarrow$ ∪ $\quad m = \frac{3 \pm \sqrt{9 + 720}}{10}$ $\quad m = 3$ ✓ $\quad m = -2/4$ غ ق ق $m > 0$ $\quad x = \frac{-b}{2a} = \frac{12}{6} = 2$ $\quad x = 2$	۶
$x^2 + 2(a+1)x + 2a - 1 = 0 \quad P = \alpha\beta = 2a - 1 = a^2$ $\alpha^2 + 2\alpha(a+1) + 2a - 1 = 0 \quad a^2 - 2a + 1 = 0$ $\beta^2 + 2\beta(a+1) + 2a - 1 = 0 \quad (a-1)^2 = 0$ $\alpha, a, \beta \longrightarrow$ هندسی $\quad a^2 = \alpha\beta \quad a = 1$	۷
$x^4 - 7x^2 - 5 = 0 \quad y = x^2 \quad y^2 - 7y - 5 = 0 \quad y = \frac{7 \pm \sqrt{49 + 20}}{2}$ ($\sqrt{69}$) $y = x^2 = \frac{7 + \sqrt{69}}{2} \Rightarrow x = \pm\sqrt{\frac{7+\sqrt{69}}{2}}$ $2P^2 - 2SP + 2S = 2P^2 = 2y^2 = 2 \times \frac{49 + 69 + 14\sqrt{69}}{4} = \frac{118 + 14\sqrt{69}}{2}$ $\quad S = 0$ $\quad P = -y$ $= 59 + 7\sqrt{69}$	۸
$y = kx^2 - 4x - 6 \longrightarrow S\left(\frac{4}{2k}, \frac{-(16 + 24k)}{4k}\right)$ $y = -4x - 4 \rightarrow -4\left(\frac{4}{2k}\right) - 4 = \frac{-8 - 4k}{k} = \frac{-(4 + 6k)}{k}$ $8 + 4k = 4 + 6k$ $2k = 4 \quad k = 2$ $y_S = -8$	۹
$-mx^2 + mx + 1 = -m - x$ $-mx^2 + (m+1)x + m + 1 = 0 \longrightarrow \Delta < 0$ $(m+1)^2 + 4m(m+1) < 0$ $m^2 + 1 + 2m + 4m^2 + 4m < 0$ $5m^2 + 6m + 1 < 0$ $\quad$ $-1 \quad \frac{-1}{5}$: $+ \; 0 \; - \; 0 \; +$ $m = -1$ $\quad \hookrightarrow (-1, \frac{-1}{5}) \longrightarrow$ m شامل عدد صحیح است. $m = \frac{-1}{5}$	۱۰