نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ..۲۲.. کلاس .....

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$\alpha^2 = 5\alpha - 2$, $\beta^2 = 5\beta - 2$

$\alpha\beta = 2 \to \alpha = \frac{2}{\beta} \to \xi\alpha = \frac{8}{\beta} \to \xi\alpha = \xi(5-\beta) = 20 - 4\beta \Rightarrow \beta^4 = B_x(5\beta-2) = 5\beta^2 - 4\beta = 25\beta - 10 - 4\beta$

$\beta^5 = B \times (\beta^2)^2 = B \times ((5\beta-2)^2) = B(25\beta^2 - 20\beta + 4) = 25\beta^3 - 20\beta^2 + 4\beta$

$\to 25(25\beta - 10) - 20(5\beta - 2) + 4\beta = 479\beta - 210$

$\frac{(20-4\beta)(479\beta-210)}{5\beta^2} = \frac{479\beta - 190}{5\beta^2} \xrightarrow{\div 5} = \frac{95\beta - 38}{\beta^2} \to \frac{19(5\beta-2)}{\beta^2} = 19$

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$q_5 \xrightarrow{\text{y ها برابرند}} \frac{c-18}{2} = 0.75$

$\frac{\alpha+\beta}{2} = 0.75 \to \alpha + \beta = 115$

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$\frac{\sqrt{\Delta}}{|a|} = \frac{4}{c}k \to \sqrt{4k^2 - 20} = \frac{4k}{c} \to 4k^2 - 20 = \frac{16}{9}k^2 \xrightarrow{\div 4} k^2 - 5 = \frac{4}{9}k^2$

$\to \frac{5}{9}k^2 = 5 \to k^2 = 9$

$\left[\frac{k^2}{2}\right] \xrightarrow{k^2=9} [4.5] = 4$

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$q_5 = \frac{c-5}{2} = -1 \xrightarrow{y_5 = 1} Ext\left|\begin{matrix}-1\\1\end{matrix}\right.$

$\alpha^2 + \beta^2 = 5 \to (\alpha+\beta)^2 = 5 + 2\alpha\beta \xrightarrow{\alpha+\beta=-2} 4 = 5 + 2\alpha\beta \to \alpha\beta = -\frac{1}{2}$

$y = a(x-h)^2 + k \to y = a(x+1)^2 + 1 \xrightarrow{y=0} 0 = a(x+1)^2 + 1 \to a = \frac{-1}{(x+1)^2}$

$(x+1)^2 = \frac{-1}{a} \Rightarrow \alpha, \beta = -1 \pm \sqrt{\frac{-1}{a}}$

$y = a(0+1)^2 + 1 \to y = a + 1 \to \frac{1}{2} = a + 1 \to a = -\frac{1}{2} \Rightarrow Ext\left|\begin{matrix}0\\\frac{1}{4}\end{matrix}\right.$

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$-x^2 + 5x + m = 0$ $\quad x_1, x_2 = \frac{-5 \pm \sqrt{25+4m}}{-2} < \frac{9}{2} \to 5 \pm \sqrt{25+4m} < 9$

$\pm\sqrt{25+4m} < 4$ $\quad 0 \leq 25+4m < 16 \to -\frac{25}{4} \leq m < -\frac{9}{4}$

$[-3, -9] \leftarrow$ ۴ عدد صحیح

$x_s = \frac{-b}{2a} = \frac{6}{m} \rightarrow y_{min} = m\left(\frac{6}{m}\right)^2 - 12 \times \frac{6}{m} + 5m - 1$ $\rightarrow y_{min} = \frac{-36}{m} + 5m - 1 \rightarrow 2 = \frac{-36}{m} + 5m - 1 \rightarrow 3 = \frac{-36}{m} + 5m$ $\rightarrow 3m = -36 + 5m^2 \rightarrow 5m^2 - 3m - 36 = 0 \Rightarrow m = 3$ $\rightarrow y = 3x^2 - 12x + 12 \rightarrow x_s = \frac{-b}{2a} = 2$	۶
$\alpha, a, \beta \Rightarrow a^2 = \alpha\beta = P = \frac{c}{a} = \frac{2a-1}{1} \rightarrow a^2 = 2a - 1$ $\rightarrow a^2 - 2a + 1 = 0$ $(a-1)^2 = 0 \Rightarrow a = 1$	۷
$x^2 = t \rightarrow t^2 - 7t - 5 = 0 \rightarrow t \begin{cases} \frac{7+\sqrt{69}}{2} \\ \frac{7-\sqrt{69}}{2} \times \text{منفی} \end{cases}$ $\rightarrow x^2 = \frac{7-\sqrt{69}}{2}$ $x = \pm\sqrt{\frac{7-\sqrt{69}}{2}} \rightarrow S = 0$ $P = -\frac{7-\sqrt{69}}{2} \rightarrow P = \frac{7+\sqrt{69}}{2}$ $\rightarrow 2P^2 - 3SP + 2S$ $= 2 \times \frac{49 + 14\sqrt{69} + 69}{4} = \frac{118 + 14\sqrt{69}}{2}$ $= 59 + 7\sqrt{69}$	۸
$y = kx^2 - 4x - 6 \rightarrow x_s = \frac{2}{k}$ $y_s = k\left(\frac{2}{k}\right)^2 - 4\left(\frac{2}{k}\right) - 6 = \frac{4}{k} - \frac{8}{k} - 6 \rightarrow y_s = -\left(\frac{4}{k} + 6\right)$ (1) $y = -4x - 4 = -4\left(\frac{2}{k}\right) - 4 = -\frac{8}{k} - 4$ (2) $\{(1),(2) \rightarrow \frac{8}{k} + 4 = \frac{4}{k} + 6$ $\rightarrow \frac{4}{k} = 2 \rightarrow k = 2$ $y_s = \frac{-4}{k} - 6 = \frac{-4}{2} - 6 = -8$	۹
$-mx^2 + mx + 1 \neq m - n \rightarrow \Delta < 0 \rightarrow -mx^2 + (m+1)x + m + 1 = 0$ $(m+1)^2 + (4)(m)(m+1) < 0 \rightarrow m^2 + 2m + 1 + 4m^2 + 4m < 0$ $\rightarrow 5m^2 + 6m + 1 < 0 \rightarrow (5m+1)(m+1) < 0$ $-1 \quad -\frac{1}{5}$ $+ \quad - \quad +$ $\rightarrow$ صفر عدد صحیح	۱۰