نام و نام خانوادگی سحر رحیم‌زاده .... پاسخنامه تشریحی تکلیف شماره ۲.۲ کلاس دهم تجربی B ....

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$x^2-5x+2=0 \qquad S=5 \qquad P=2 \Rightarrow \alpha\beta=2 \Rightarrow \beta=\frac{2}{\alpha}$

$\frac{4\alpha+\beta^5}{5\beta^2} \Rightarrow \frac{4\alpha}{5\beta^2}+\frac{\beta^3}{5} = \frac{4\alpha}{\frac{5\times 4}{\alpha^2}}+\frac{\beta^3}{5} = \frac{\alpha^3+\beta^3}{5} =$

$\frac{(\alpha+\beta)^3-3\alpha\beta(\alpha+\beta)}{5} = \frac{125-3\times2\times5}{5} = 25-6=\boxed{19}$

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$\begin{bmatrix}3\\-4\end{bmatrix}, \begin{bmatrix}-1.5\\-4\end{bmatrix}$

طول رأس $= \frac{-b}{2a} = \frac{3-1.5}{2} = 0.75 \Rightarrow \frac{-b}{2a}=\frac{1.5}{2} \Rightarrow \boxed{S=-\frac{b}{a}=1.5}$

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$|\alpha-\beta| = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{4k^2-20}}{1} = \frac{4}{3}k$

$3\sqrt{k^2-5}=2k \Rightarrow 9(k^2-5)=4k^2 \Rightarrow 5k^2-45=0$

$5(k^2-9)=0 \qquad k^2-9=0 \Rightarrow k^2=9$

$[\frac{9}{2}] = [4.5] = \boxed{4}$

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$\frac{-b}{2a} = \frac{3-5}{2} \Rightarrow \frac{-b}{a}=-2=S \qquad \rightarrow S(-1,1)$

$\alpha^2+\beta^2 = S^2-2P = 4-2P = 5 \rightarrow 2P=-1 \Rightarrow P=-\frac{1}{2}$

$y=a(x^2-Sx+P) = a(x^2+2x-\frac{1}{2})$

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

$x=0 \Rightarrow y=-\frac{2}{3}(0+0-\frac{1}{2}) = \frac{1}{3} \Rightarrow \boxed{c=\frac{1}{3}}$

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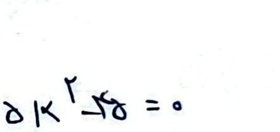
$-x^2+5x+m=0$

$S<9$ ✓

$P>0 \Leftarrow$ در این حالت جمع ریشه‌ها علامت ... است شود



$P>0 \Rightarrow -m>0 \Rightarrow m<0$

دو ریشه $\Rightarrow \Delta>0 \Rightarrow 25+4m>0 \qquad m>-\frac{25}{4}$

$P<\frac{81}{4} \Rightarrow -m<\frac{81}{4} \Rightarrow m>-\frac{81}{4}$

$\Rightarrow -\frac{25}{4}<m<-\frac{9}{4}$

مقادیر صحیح $m = -6, -5, -4, -3$

که $\boxed{-5}$

۴ تا

$\frac{9}{2}$ بزرگتر از نصفه $\rightarrow -\frac{81}{4}+\frac{45}{2}+m<0$

$\frac{-81+90}{4}+m<0 \qquad m<-\frac{9}{4}$

$y_{min} = 2 \Rightarrow m > 0 \Rightarrow \frac{-\Delta}{4a} = 2 \quad \frac{-(144 - 20m^2 + 4m)}{4m} =$ $\frac{20m^2 - 4m - 144}{4m} = \frac{5m^2 - m - 36}{m} = 2 \Rightarrow 5m^2 - 3m - 36 = 0$ $(5m + 12)(m - 3) = 0 \rightarrow m = 3$ ✓ , $m = -\frac{12}{5}$ ✗ غ ق ق $\Rightarrow m = 3 \Rightarrow y = 3x^2 - 12x + 14 \rightarrow -\frac{b}{2a} = 2 \Rightarrow \boxed{x = 2}$ ← طول رأس سهمی	۶
$\underset{\times q}{\alpha}, \underset{\times q}{a}, \beta \Rightarrow a^2 = \alpha\beta = P$ $\alpha\beta = 2a - 1 \Rightarrow 2a - 1 = a^2 \Rightarrow a^2 - 2a + 1 = 0 \rightarrow (a-1)^2 = 0 \Rightarrow \boxed{a = 1}$	۷
$x^4 - 7x^2 - 5 = 0 \rightarrow t^2 - 7t - 5 = 0$ $t_1, t_2 = \frac{7 \pm \sqrt{69}}{2} \rightarrow \frac{7 + \sqrt{69}}{2}$ ✓ , $\frac{7 - \sqrt{69}}{2} < 0$ غ ق ق $t = x^2 = \frac{7 + \sqrt{69}}{2} \Rightarrow x^2 - \frac{(7 + \sqrt{69})}{2} = 0 \rightarrow S = 0, \; P = \frac{-(7 + \sqrt{69})}{2}$ $2P^2 - 3SP + 2S = 2\frac{(7 + \sqrt{69})^2}{4} - 0 + 0 = \frac{49 + 69 + 14\sqrt{69}}{2} = \frac{118 + 14\sqrt{69}}{2} = \boxed{59 + 7\sqrt{69}}$	۸
$y = kx^2 - 4x - 6 \rightarrow S \left\| \begin{matrix} \frac{-b}{2a} \\ \frac{-\Delta}{4a} \end{matrix} \right. \Rightarrow S \left\| \begin{matrix} \frac{2}{k} \\ \frac{-(16 + 24k)}{4k} \end{matrix} \right. \Rightarrow S \left\| \begin{matrix} \frac{2}{k} \\ \frac{-4 - 6k}{k} \end{matrix} \right.$ $y = -4x - 4$ رأس روی خط $\Rightarrow -4\left(\frac{2}{k}\right) - 4 = \frac{-4 - 6k}{k} \rightarrow \frac{-8 - 4k}{k} = \frac{-4 - 6k}{k}$ $\frac{-4 + 2k}{k} = 0 \Rightarrow 2k - 4 = 0 \Rightarrow k = 2 \Rightarrow \frac{-4 - 6k}{k} = \frac{-16}{2} = \boxed{-8}$	۹
$\left.\begin{matrix} y = -mx^2 + mx + 1 \\ y = -m - x \end{matrix}\right\} \Rightarrow -mx^2 + mx + 1 = -m - x$ $mx^2 + (-m - 1)x - (m + 1) = 0 \xRightarrow{\text{تلاقی} \times} \Delta < 0$ $(m+1)^2 + 4m(m+1) < 0$ $(m+1)(m + 1 + 4m) < 0 \Rightarrow (m+1)(5m+1) < 0$ $-1, \; -\frac{1}{5}$: $+ \mid - \mid +$ $\quad m \in (-1, -\frac{1}{5})$ ← عدد صحیح ✗	۱۰