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

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$3x^2 - ax + 6$

$\beta = 2\alpha ,\ \alpha$

$\frac{b}{a} = \frac{a}{3}$

$\frac{c}{a} = 2\alpha^2$

$\frac{6}{3} = 2\alpha^2$

$\alpha^2 = \frac{6}{9}$

$\alpha = \frac{2}{3}$, $\beta = 2$, m_2 : $\frac{a}{3} = \frac{8}{3}$, $m_2 a = 8$

$\alpha = \frac{-2}{3}$, $\beta = -2$, m_1 : $\frac{a}{3} = \frac{-8}{3}$, $m_1 a = -8$

$|8 - (-8)| = 16$

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$\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} = 5$

$\frac{\sqrt{\alpha} + \sqrt{\beta}}{\sqrt{\alpha\beta}} = 5$

$\frac{\alpha + \beta + 2\sqrt{\alpha\beta}}{\alpha\beta} = 25$

$\frac{\frac{m+12}{36} + 2\sqrt{\frac{1}{36}}}{\frac{1}{36}} = 25$

$m + 24 = 25$

$m = 1$

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

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

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$S = 1$, $\alpha + \beta = 1$, $\beta = 1 - \alpha$

$\alpha(1-\alpha) = -2$ $\Rightarrow$ $\alpha^2 - \alpha - 2 = 0$

$(\alpha - 2)(\alpha + 1) = 0$

$\alpha = 2$, $\beta = -1$

$\alpha = -1$, $\beta = 2$

$P(-1)^2 + k(-1)^2 - 9(-1) - 2 = 0$

$-6 + k + 9 - 2 = 0$

$k = -3$

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$x^2 + 4x + a = 0$

$\frac{b}{a} = -4$, $P = a$

$3\alpha^2 + 2\beta^2 = 12\sqrt{2} + 18a$

$3\alpha^2 + 2(-\alpha - 4)^2 = 12\sqrt{2} + 18a$

$5\alpha^2 + 16\alpha + 32 = 12\sqrt{2} + 18a$

$5\alpha^2 + 16\alpha - 12 - 12\sqrt{2} = 0$

$\alpha = \frac{-24 \pm \sqrt{24^2 - 4(5)(-12-12\sqrt{2})}}{10}$

$= \frac{-24 \pm \sqrt{1056 + 240\sqrt{2}}}{10}$

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$x^4 - 7x^2 - 5 = 0$

$t^2 - 7t - 5 = 0$

$49 + 20 = 69$

$t = \frac{7 \pm \sqrt{69}}{2}$

$x^2 = \frac{7 \pm \sqrt{69}}{2}$

$\frac{7 - \sqrt{69}}{2} < 0$ ✗

$\frac{7 + \sqrt{69}}{2}$

$4P^2 - 35P + 25 = 0$ $\Rightarrow$ $4P^2 = 2\left(-\frac{7\sqrt{69}}{2}\right)^2 = 483 + 7\sqrt{69}$

$S = -\sqrt{\frac{7\sqrt{69}}{2}} + \sqrt{\frac{7\sqrt{69}}{2}} = 0$, $P = -\frac{(7\sqrt{69})}{2}$

$2x^2 - ax + b$ $\qquad$ $2ax^2 + ax - 4$

$\frac{a}{2}$ $\qquad$ $\frac{b}{a} = \frac{-a}{2a} = \frac{-1}{2} \Rightarrow \frac{-1}{2} + \frac{1}{2} + \frac{1}{2} = \frac{a}{2} \Rightarrow a = 1$

$\left[\frac{ab}{4}\right] = \left[\frac{-4}{4}\right] = \boxed{-2}$

$2x^2 + x - 6 = 0$

$x^2 + x - 12 = 0$

$(x - 4)(x + 3) = 0$ $\qquad$ $\boxed{b = -6} \leftarrow \frac{b}{2} = -3$

$\frac{4}{2} \quad \frac{-3}{2} \Rightarrow \quad \Rightarrow \frac{4}{2}, \frac{-3}{2} \Rightarrow P = -$ ۶

$(2\beta^2 + \alpha^2 - \beta) = \frac{17}{20}$ $\qquad$ $20\beta^2 - 20\beta + 1 = 0$

$\alpha + \beta = \frac{a}{a} = 1$ $\qquad$ $\alpha - \beta = \sqrt{S^2 - 4P} = \sqrt{1 - 4\alpha\beta} = \sqrt{1 - 4((1-\beta)\beta)}$

$\alpha = 1 - \beta$ $\qquad$ $\times \frac{20}{4}$ $\quad = \sqrt{4\beta^2 - 4\beta + 1} = ?$

$2\beta^2 + (1-\beta)^2 - \beta = \frac{17}{20}$ $\qquad$ $20\beta^2 - 20\beta + 1 = 0$

$3\beta^2 - 3\beta + \frac{3}{20} = 0$ $\qquad$ $4\beta^2 - 20\beta + \frac{1}{5} = 0$

$4\beta^2 - 20\beta + 1 = \frac{4}{a}$ $\qquad$ $\sqrt{4\beta^2 - 4\beta + 1} = \sqrt{\frac{4}{a}} = \boxed{\frac{2}{\sqrt{a}}}$ ۷

$x^2 - (a+1)x + a$ $\qquad$ $x^2 - (3a+1)x + b = 0$

$\alpha, \alpha + 2$ $\quad S = 2\alpha + 2 = a + 1$ $\qquad$ $S = 3(3) + 1 = 10$ $\quad \alpha_2 + \alpha_2 + 2 = 10$

$P = \alpha^2 + 2\alpha = a$ $\qquad$ $\alpha_2 = 4 \quad \beta_2 = 6$

$\alpha = 1$ $\qquad$ $\alpha^2 - 2 = -1$ $\qquad$ $b = P = \alpha_2 \times \beta_2 = \boxed{24}$

$\beta = \alpha + 2 = 3$ $\qquad$ $\alpha = \pm 1 \Rightarrow \alpha = -1$ ✗

$S = 1 + 3 = 4$, $P = 1 \times 3 = 3$ $\Rightarrow$ $a + 1 = 4$, $a = 3$ $\Rightarrow \boxed{a = 3}$ $\qquad$ $P_2 - P_1 = 24 - 3 = \boxed{21}$ ۸

$x^2 + x - 1 - m^2 = 0$

$\alpha^2 + \beta^2 = S^2 - 2P = 1 - 2(-1 - m^2) = 3 + 2m^2$

$\min(2m^2 + 3) \overset{m=0}{\Rightarrow} \boxed{3}$ ۹

چون m^2 همواره +

پس m^2 min $= 0$

$A(3, y)$, $B(-5, y)$ $\quad \frac{3 + (-5)}{2} = -1$ min $\quad$ • -1, 1 $\qquad$ $y - 1 = a(x - (-1))^2 \Rightarrow y = ax^2 + 2ax + a + 1$

$\alpha^2 + \beta^2 = S^2 - 2P = \left(\frac{-2}{a}\right)^2 - 2\left(\frac{a+1}{a}\right) = 5 \Rightarrow 2a + 2 = -a$ $\quad \boxed{a = \frac{-2}{3}}$ ۱۰

$a + 1 = \frac{-2}{3} + 1 = \boxed{\frac{1}{3}}$ $\qquad$ عرض مبدأ