

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۹۰... کلاس:
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$$B = 3\alpha \rightarrow 3\alpha^2 = \frac{C}{\alpha} = \frac{r}{3} \rightarrow \alpha = \pm \frac{r}{3}$$

$$\left. \begin{aligned} \alpha = \frac{r}{3} &\rightarrow B = r \rightarrow \alpha + B = \frac{A}{3} = -\frac{b}{a} = \frac{a}{3} \rightarrow \alpha_1 = 1 \\ \alpha = -\frac{r}{3} &\rightarrow B = -r \rightarrow \alpha + B = -\frac{A}{3} = \frac{a}{3} \rightarrow \alpha_2 = -1 \end{aligned} \right\} \alpha_1 - \alpha_2 = 14 \checkmark$$

$$\frac{1}{\sqrt{a}} + \frac{1}{\sqrt{b}} = 5 \rightarrow \frac{\alpha + \beta}{\alpha\beta} + \frac{1}{\sqrt{\alpha\beta}} = 5 \xrightarrow{\alpha\beta = 1/36} 36(\alpha + \beta) + 12 = 5 \cdot 36$$

$$\rightarrow \alpha + \beta = \frac{13}{36} = \frac{m+14}{36} \rightarrow m = -1$$

$$m = -1 \rightarrow m\alpha^2 + 3\alpha + 1 = -\alpha^2 + 3\alpha + 1 = 0 \rightarrow \alpha' \beta = \frac{C}{a} = \frac{1}{-1} = -1 \checkmark$$

$$\alpha + \beta = 1 \rightarrow \alpha^2 + \beta^2 + 2\alpha\beta = 1 \xrightarrow{\alpha\beta = 1} \alpha^2 + \beta^2 = 1 \rightarrow \alpha - \beta = 3$$

$$\begin{cases} \alpha + \beta = 1 \\ \alpha - \beta = 3 \end{cases} \Rightarrow \alpha = 2, \beta = -1 \rightarrow -k + k + 9 - 1 = 0 \rightarrow k = -3 \checkmark$$

$$3\alpha^2 + 2\beta^2 = 12\sqrt{2} + 15 \rightarrow 2, 5(\alpha^2 + \beta^2) + 0, 5(\alpha^2 - \beta^2) = 12\sqrt{2} + 15$$

$$\frac{1}{p}(s^2 - 4p) + \frac{1}{p}(s)(\sqrt{s^2 - 4p}) = 12\sqrt{2} + 15 \xrightarrow{s = -4}$$

$$\frac{1}{p}(36 - 4a) + \frac{1}{p}(4)(\sqrt{36 - 4a}) = 12\sqrt{2} + 15 \rightarrow 90 - 5a + 4\sqrt{9 - a} = 12\sqrt{2} + 15$$

$$12\sqrt{2} + 15 \rightarrow 90 - 5a + 4\sqrt{9 - a} = 4\sqrt{1} + 15 \rightarrow a = 1 \checkmark$$

$$x^2 = t \rightarrow t^2 - 4t - 5 = 0 \rightarrow t = 5 \rightarrow x = \pm\sqrt{5}, t = -1 \rightarrow x = \pm\sqrt{-1}$$

$$S = 0 \rightarrow 2p^2 - 3sp + 2s = 2p^2 \left\{ \begin{aligned} t_1 &= \frac{3 + \sqrt{49}}{2} \sqrt{1}, t_2 = \frac{3 - \sqrt{49}}{2} \end{aligned} \right.$$

$$\rightarrow \alpha^2 = \frac{3 + \sqrt{49}}{2} \rightarrow x = \pm\sqrt{\frac{3 + \sqrt{49}}{2}} \rightarrow 2p^2 = \frac{118 + 14\sqrt{49}}{2} = 59 + 7\sqrt{49} \checkmark$$

$$rax^r + ax - 4 = 0 \rightarrow \alpha + \beta = -\frac{b}{a} = -\frac{1}{r}$$

$$rx^r - ax + b = 0 \rightarrow \alpha' + \beta' = \frac{1}{r} \rightarrow a = 1 \rightarrow \alpha\beta = -r$$

$$(\alpha + \frac{1}{r})(\beta + \frac{1}{r}) = \frac{\alpha + \beta}{r} + \alpha\beta + \frac{1}{r} = \alpha'\beta' = \frac{b}{r} \rightarrow \frac{b}{r} = -r \rightarrow b = -4$$

$$\left[\frac{ab}{r}\right] = \left[-\frac{4}{r}\right] = -r \quad \checkmark$$

$$r_0\beta' + r_0\alpha' - r_0\beta = 1V \Rightarrow (r_0\beta' + r_0\alpha') + r_0\beta' - r_0\beta = 1V \Rightarrow r_0(\beta' + \alpha') + r_0(\beta' - \beta) = 1V$$

$$ax^r - ax - b = 0 \quad x = \beta \rightarrow a\beta' - a\beta - b = 0 \Rightarrow a(\beta' - \beta) = b \Rightarrow \beta' - \beta = \frac{b}{a}$$

$$\alpha' + \beta' = S^r - rP = (1)^r - r(-\frac{b}{a}) = 1 + \frac{rb}{a} \quad \left\{ r_0(1 + \frac{rb}{a}) + r_0(\frac{b}{a}) = 1V \rightarrow \frac{b}{a} = -\frac{1}{r_0} \right.$$

$$|\alpha - \beta| = \sqrt{S^r - rP} = \sqrt{1^r - r(-\frac{b}{a})} = \sqrt{1 - r(-(-\frac{1}{r}))}$$

$$= \sqrt{1 - \frac{r}{r}} = \frac{r}{\sqrt{a}} \quad \checkmark$$

$$\alpha + r - \alpha = \frac{\sqrt{\Delta}}{|a|} = |\alpha - 1| = r \rightarrow \alpha = r + 1$$

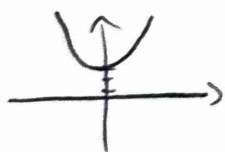
ریشه ها: α و $\alpha + r$

$$\underline{a = -1} \rightarrow x^r - 1 = 0 \rightarrow \alpha = \pm 1 \rightarrow \cup \cup \mathbb{C} \rightarrow \alpha = r$$

$$x^r - 1 \cdot x + b = 0 \rightarrow \beta' + r - \beta = \frac{\sqrt{\Delta}}{|a|} = r\sqrt{r_0 - b} = r \rightarrow b = r^2$$

$$\alpha\beta = r, \quad \alpha'\beta' = r^2 \rightarrow r^2 - r = 1 \quad \checkmark$$

$$\alpha' + \beta' = S^r - rP = rm^r + r$$



$$y_{\min} = r \quad \checkmark$$

$$y = ax^r + bx + c \quad \{ x_B + x_A = \alpha + \beta = -r \mid \frac{x_B + x_A}{r} = -\frac{b}{ra} = -1 \rightarrow a = b$$

$$y = ax^r + rax + c \quad \underline{c|1} \rightarrow 1 = a - ra + c \rightarrow c - a = 1$$

$$S^r - rP = 0 \rightarrow r - rP = 0 \rightarrow P = -\frac{1}{r} \rightarrow \frac{c}{a} = -\frac{1}{r} \rightarrow -rc = a$$

$$\rightarrow rc = 1 \rightarrow c = \frac{1}{r} \quad \checkmark$$