

۱۶, ۵

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۱۹ کلاس: B

در صورتی که

$$y = 3x^2 - ax + 4 = 0$$

$$x_1 = 3x_2 \Rightarrow x_1 + x_2 = S = \frac{a}{3} = 3x_2$$

$$\frac{a}{3} = P = 3x_2^2 \Rightarrow \frac{a}{9} = x_2^2 \Rightarrow x_2 = \pm \frac{\sqrt{a}}{3} \Rightarrow x_1 = \pm \sqrt{a} \Rightarrow a = 9$$

$$a = 16 \quad \checkmark$$

$$y_1 = 36x^2 - (m+14)x + 1 = 0 \Rightarrow (\sqrt{x_1} + \sqrt{x_2})^2 = 2 \Rightarrow x_1 + x_2 + 2\sqrt{x_1 x_2} = 2$$

$$S + 2\sqrt{\frac{1}{36}} = 2 \Rightarrow S = 2 - \frac{1}{3} = \frac{5}{3} \Rightarrow \frac{m+14}{36} = \frac{5}{3} \Rightarrow m = 14$$

$$m = 14 \Rightarrow \frac{2}{m} = \frac{2}{14} = \frac{1}{7} \quad \checkmark$$

$$y = 4x^3 + kx^2 - 9x - 2 = 0$$

$$\begin{cases} \alpha + \beta = 1 \\ \alpha\beta = -2 \end{cases} \Rightarrow \alpha + \beta + \gamma = \frac{-k}{4} \Rightarrow 1 + \frac{1}{\epsilon} = \frac{3}{\epsilon} = -\frac{k}{\epsilon} \Rightarrow k = -3$$

$$y = x^2 + 4x + a = 0 \Rightarrow \begin{cases} \alpha = -2 + \sqrt{4-a} \Rightarrow \alpha^2 = 11-a-4\sqrt{4-a} \\ \beta = -2 - \sqrt{4-a} \Rightarrow \beta^2 = 11-a+4\sqrt{4-a} \end{cases}$$

$$3\alpha^2 + 2\beta^2 = 40 - 2a + 4\sqrt{4-a} = 12\sqrt{2} - 14 \Rightarrow 2a + 4\sqrt{4-a} = 26 - 12\sqrt{2}$$

$$a = 1 \quad \checkmark$$

$$ax^n + bx^{n-1} + \dots + c = 0 \rightarrow \frac{-b}{a} = \frac{0}{1} = 0 = S$$

$$\left\{ \frac{c}{a} \right\} = \frac{c}{a} = P$$

$$2P^2 - 3PS + 2S^2 = 0$$

$$y = rx^r - ax + b = 0$$

$$\left[\frac{a \times b}{r} \right] = \left[\frac{-r \times 1}{\varepsilon} \right] = \frac{-r}{\varepsilon}$$

(r)

$$y_r = rax^r + ax - r = 0$$

$$P_1 = P_r + 0,1 \Delta S_r + \frac{1}{\varepsilon} \Rightarrow \frac{b}{r} = -r \Rightarrow b = -r^2$$

$$\alpha_1 = \alpha_r + 0,1 \Delta$$

$$\beta_1 = \beta_r + 0,1 \Delta$$

$$\Rightarrow \tilde{S}_1 = \tilde{S}_r + 1 = \frac{a}{r} = \frac{-1}{r} + 1 \Rightarrow a = 1$$

$$r \cdot (\alpha \beta^r + \alpha^r - \beta) = 14$$

$$\alpha \beta^r - a \beta = b \Rightarrow \beta^r - \beta = \frac{b}{a}$$

$$\beta^r + \alpha^r = \tilde{S}^r - rP = 1 + \frac{rb}{a}$$

$$|\alpha - \beta| = \sqrt{\tilde{S}^r - \varepsilon P} = \sqrt{1 - \frac{1}{\varepsilon}}$$

$$\left. \begin{array}{l} \beta^r - \beta = \frac{b}{a} \\ \beta^r + \alpha^r = 1 + \frac{rb}{a} \end{array} \right\} + \Rightarrow \frac{rb}{a} + 1 = \frac{14}{r}$$

(r)

$$y_1 = x^r - (a+1)x + a = 0 \Rightarrow \frac{\sqrt{\Delta}}{1} = r \Rightarrow a^r + 1 + ra - ra = \sqrt{a^r - ra + 1} = r$$

(r)

$$a^r - ra - r = 0 \Rightarrow (a-r)(a+1) \Rightarrow a = r \text{ or } -1 \Rightarrow a = -1$$

$$y_r = x^r - 1 \cdot x + b = 0 \Rightarrow \frac{\sqrt{\Delta}}{1} = r \Rightarrow 1 - rb = r \Rightarrow b = 2\varepsilon$$

$$2\varepsilon - r = 1 \Rightarrow r = 1$$

$$x^r - 1 \cdot x + 2\varepsilon = (x-r)(x^r - \frac{1}{r}) = 0 \Rightarrow \Delta = 4, \varepsilon \rightarrow 2 \times \varepsilon = 2\varepsilon$$

$$y = x^r + x - 1 - m^r = 0$$

$$x^r + x - 1 = 0 \quad \Delta > 0$$

$$\alpha^r + \beta^r = \tilde{S}^r - rP \Rightarrow 1 + r + rm^r = (r + rm^r) \rightarrow \min \text{ of } m = 0$$

(r)

$$\left. \begin{array}{l} \tilde{S} = -1 \\ rP = -1 - m^r \end{array} \right\} \rightarrow r = \min(\alpha^r + \beta^r)$$

$$B \left| \begin{array}{c} -a \\ y \end{array} \right. A \left| \begin{array}{c} r \\ y \end{array} \right. \Rightarrow \left. \begin{array}{l} x_S = \frac{-a+r}{r} = -1 \\ y_S = 1 \end{array} \right\}$$

$$\left. \begin{array}{l} C - a = 1 \\ rC = -a \end{array} \right\} rC = 1 \Rightarrow C = \frac{1}{r}$$

(r)

$$y = ax^r + bx + C \Rightarrow \frac{-b}{ra} = -1 \quad | \quad a - b + C = 1 \quad | \quad \alpha^r + \beta^r = \tilde{S}^r - rP = \frac{b^r}{a^r} - \frac{rC}{a} = a$$

$$b = ra \Rightarrow C - a = 1$$

$$\frac{\varepsilon a^r}{a^r} - \frac{rC}{a} = 1 \Rightarrow \frac{rC}{a} = -1$$

$$\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} = \frac{\sqrt{\alpha} + \sqrt{\beta}}{\sqrt{\alpha\beta}} = \alpha \xrightarrow{\text{تقريب}} \frac{S^r + \sqrt{p}}{p} = r\alpha \quad (r)$$

$$\frac{S = \frac{m+1r}{r_4}}{p = \frac{1}{r_4}} \rightarrow m = -1 \rightarrow -n^r + r_n + r = 0 \rightarrow \frac{c}{a} = \boxed{-r}$$

$$n^r = t \rightarrow t^r - vt - \alpha = 0 \rightarrow t = \frac{v \pm \sqrt{49}}{r} \quad t > 0 \quad (a)$$

$$n_1 = \sqrt{\frac{v + \sqrt{49}}{r}} \quad n_r = -\sqrt{\frac{v + \sqrt{49}}{r}} \Rightarrow S = 0, p = -\left(\frac{v + \sqrt{49}}{r}\right)$$

$$r\rho^r - \cancel{r^2\rho} + \cancel{r^2} = r\rho^r = 29 + v\sqrt{49}$$