

18/1/28

Date

* کسان حفصی *

Subject

① $\alpha, \beta = r\alpha \Rightarrow r = r\alpha^r = \frac{r}{r} \Rightarrow \alpha^r = \frac{r}{r}$

$s = r\alpha = \frac{\pm 1}{r} = \frac{a}{r} \Rightarrow \boxed{a = \pm 1}$ (2) $\alpha = \pm \frac{r}{r}$

$1 - (-1) = 2 \checkmark$

$\boxed{\beta = \pm 1}$

(2) $\left(\sqrt{\frac{1}{\alpha}} + \sqrt{\frac{1}{\beta}}\right)^r = \frac{1}{\alpha} + \frac{1}{\beta} + r\sqrt{\frac{1}{\alpha\beta}} = 2$ (2)

$\frac{\alpha + \beta}{\alpha\beta} = \frac{s}{p} = \frac{\frac{m+1}{r}}{\frac{1}{rs}} = m+1$

$\Rightarrow m+1 + 1 = 2 \Rightarrow \boxed{m = -1} \Rightarrow -n^r + r n + r = 0$

$\Rightarrow p = \frac{r}{-1} = -r \checkmark$

(3) $(\alpha + \beta)^r = 1 \Rightarrow \alpha^r + \beta^r + r\alpha\beta = 1$

$\Rightarrow \alpha^r + \beta^r - r = 1 \Rightarrow \alpha^r + \beta^r + \underbrace{r}_{-r\alpha\beta} = 1 \Rightarrow \alpha - \beta = r$ (2)

$\begin{cases} \alpha + \beta = 1 \\ \alpha - \beta = r \end{cases} \Rightarrow \begin{cases} \alpha = r \\ \beta = -1 \end{cases} \Rightarrow -r^r + r + 1 - r = 0$
 $\boxed{r = -1} \checkmark$

(4) $r_1\alpha^r + r_2\beta^r + r_3\alpha^r - r_4\beta^r = r_1(\alpha^r + \beta^r) + r_2(\alpha^r - \beta^r)$

$r_1\alpha(s^r - rP) + r_2(\alpha^r - \beta^r)$ $\left\{ \begin{matrix} s = -1, P = a \end{matrix} \right.$

$r_1\alpha(r_3 - r_4) + r_2(r_3 - r_4)$

$90 - 2a + \sqrt{100 - 4a} = 100 + 10\sqrt{r}$ (2)

$10 \Rightarrow \boxed{a = 1} \quad \sqrt{100 - 4a} = 10\sqrt{r}$

$\boxed{a = 1} \checkmark$

$$\textcircled{1} \quad z^2 - vt - \Delta = 0 \Rightarrow z = \frac{v \pm \sqrt{v^2 + 4\Delta}}{2} \leq \frac{v + \sqrt{v^2 + 4\Delta}}{2} \quad \textcircled{2}$$

$$z^2 = \frac{v + \sqrt{v^2 + 4\Delta}}{2} \Rightarrow \boxed{S=0} \quad \left(\frac{v + \sqrt{v^2 + 4\Delta}}{2} \right)^2 = \frac{v^2 + 4\Delta + v\sqrt{v^2 + 4\Delta}}{2}$$

$$P^2 = \frac{111 + 14\sqrt{29}}{2} \Rightarrow 2P^2 = 111 + 14\sqrt{29} \quad \checkmark$$

$$\textcircled{3} \quad \alpha, \beta \rightarrow \alpha \rightarrow \Delta, \beta \rightarrow \Delta \quad \text{صحت سوال رویید.$$

$$S_p = \alpha + \beta = \frac{a}{r}$$

$$S_r = \alpha + \beta + 1 = S_p + 1$$

دیده بخت!

$$P_r = \alpha\beta = \frac{b}{r}$$

$$P_r = \alpha\beta + \Delta(\alpha + \beta) + 20$$

$$= P_r + \Delta S_p + 20 \quad \textcircled{1} \quad \text{بخط راه درست}$$

$$S_r = \frac{-a}{ra} = \frac{-1}{r} = \frac{a}{r} + 1 \Rightarrow \boxed{\cancel{a=r}}$$

$$P_r = \frac{-4}{r(-r)} = 1 = \frac{b}{r} + \frac{1}{r} \left(\frac{-r}{r} \right) + \frac{1}{r} \Rightarrow \boxed{\cancel{b=r}}$$

$$\frac{rb}{r} + \frac{-r}{r} + \frac{1}{r} = 1 \Rightarrow \boxed{\cancel{b=r}}$$

$$\textcircled{4} \quad \gamma_0 \beta^r + \gamma_0 \beta^r + \gamma_0 \alpha^r - \gamma_0 \beta = 12$$

$$\gamma_0 (\beta^r + \alpha^r) + \gamma_0 (\beta^r - \beta) = 12 \quad \textcircled{2}$$

$$\gamma_0 (S^r - 2P) + \gamma_0 (\beta^r - \beta) = 12 \Rightarrow \gamma_0 (\beta^r - \beta) = \frac{b}{a} = \boxed{-P}$$

$$\gamma_0 S^r - \gamma_0 P + \gamma_0 P = \gamma_0 S^r - \gamma_0 P = 12 \Rightarrow \gamma_0 - \gamma_0 P = 12 \quad S = \frac{a}{a} = \textcircled{1}$$

$$\gamma_0 P = 2 \Rightarrow P = \frac{1}{\gamma_0} \quad \sqrt{S^r - 2P} = \sqrt{1 - \frac{2}{\gamma_0}} = \sqrt{\frac{12}{\gamma_0}} = \frac{2}{\gamma_0 \Delta} \quad \checkmark$$

$$\textcircled{1} \sqrt{s^t - r p} = r = s^t - r p = r$$

(1, 1.5)

$$\Rightarrow (k+1)^t - r a - r = 0$$

$$a^t + r a + 1 - r a - r \Rightarrow a^t + 1 - r = 0 \Rightarrow a^t = r - 1$$

$$a^t - r a - r = 0 \Rightarrow a = r, \textcircled{1} \Rightarrow r^t \times r = \textcircled{2}$$

$$s^t - r p = r \Rightarrow 100 - r b = r \Rightarrow b = \textcircled{22} \checkmark \quad r t \cdot r = \textcircled{21}$$

$$\textcircled{9} y = \alpha^t + \beta^t = s^t - r p \Rightarrow 1 - r(-1 - m^t) = y$$

(r)

$$1 + r + r m^t = r m^t + r = y \quad m_{\min} = 0 \Rightarrow y_{\min} = \textcircled{2} \checkmark$$

$$\textcircled{10} \frac{-a + r}{t} = -1 \Rightarrow a(n+1)^t + 1 = y$$

(r)

$$a n^t + t a n + a + 1 = y$$

$$\alpha^t + \beta^t = s^t - r p = \frac{r a - r}{a} = 0 \Rightarrow \frac{r a - r}{a} = 0$$

$$-r a + r = 0$$

$$\frac{-r a - r}{a} = 1$$

$$1 - \frac{r}{r} = \textcircled{\frac{1}{r}} \checkmark$$

$$-r a - r = a - r = r a$$

$$a = \textcircled{\frac{r}{r}} \checkmark$$

$$r n^r - a n + b = 0 \rightarrow \begin{cases} \alpha \\ \beta \end{cases} \rightarrow s = \frac{a}{r} \quad p = \frac{b}{r}$$

(4)

$$r n^r + a n - 4 = 0 \rightarrow \begin{cases} \alpha = -\frac{1}{r} \\ \beta = -\frac{1}{r} \end{cases} \rightarrow s = \frac{a}{r} - 1 = \frac{-a}{r a} = -\frac{1}{r} \rightarrow a = 1$$

$$p = \frac{b}{r} = \frac{-4}{r a} = -r \rightarrow b = -4$$

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