

$$B \rightarrow \dots$$

19 illi

المسألة

$$1) \left. \begin{aligned} S: \alpha + \beta &\xrightarrow{B: \alpha} S: \left\{ \alpha, \frac{4}{\mu} \right\} \rightarrow \alpha = 12\alpha \\ P: \alpha\beta &\xrightarrow{\sim} P: \alpha\alpha = \frac{4}{\mu} \rightarrow \alpha = \frac{4}{\mu} \end{aligned} \right\} \rightarrow \alpha = \pm 1 \rightarrow |1 - (-1)| = 2 \quad (19)$$

$$2) \frac{1}{\sqrt{\beta}} + \frac{1}{\sqrt{\alpha}} = \frac{\sqrt{\alpha} + \sqrt{\beta}}{\sqrt{\alpha\beta}} = \delta \frac{\sqrt{\alpha}}{\sqrt{\beta}} \frac{S: \sqrt{\alpha}}{P: \sqrt{\beta}} = \delta \frac{S: \sqrt{\alpha}}{P: \sqrt{\beta}} = \delta \frac{S: \sqrt{\alpha}}{P: \sqrt{\beta}} \quad m = -1$$

$$\begin{aligned} &\rightarrow 3x + 1 - x^2 = 0 \rightarrow \frac{c}{a} = \frac{1}{-1} = -1 \\ 3) &(\alpha + \beta)^2 - (\alpha - \beta)^2 = 4\alpha\beta \rightarrow 1 - (\alpha - \beta)^2 = -1 \rightarrow (\alpha - \beta)^2 = 2 \\ &\rightarrow |\alpha - \beta| = \sqrt{2} \quad \alpha > \beta \rightarrow \alpha - \beta = \sqrt{2} \\ &\rightarrow \frac{\alpha + \beta = 1}{\alpha - \beta = \sqrt{2}} \rightarrow \alpha = \frac{1 + \sqrt{2}}{2} \rightarrow \beta = \frac{1 - \sqrt{2}}{2} \end{aligned}$$

$$\begin{aligned} 4) &3\alpha^2 + 2\beta^2 = 2(10(\alpha^2 + \beta^2) + 0(10(\alpha^2 - \beta^2)) = 2(10(14 - 2a) + 0(-\sqrt{49 - 4a})) \\ &\rightarrow 9 = -8a + 4\sqrt{-a+9} = 18 - 12\sqrt{-a+9} \rightarrow (a = 1) \end{aligned}$$

$$\begin{aligned} 5) &\omega = 1, \text{ etc. } 25 = 0 \\ &2P^2 - 3S\rho + 15 = 2P^2 \\ &\quad \quad \quad S = 0 \\ &\quad \quad \quad \omega = 1, \text{ etc. } 25 = 0 \\ &\quad \quad \quad 2P^2 - 3S\rho + 15 = 2P^2 \\ &\quad \quad \quad S = 0 \\ &\quad \quad \quad \omega = 1, \text{ etc. } 25 = 0 \\ &\quad \quad \quad 2P^2 - 3S\rho + 15 = 2P^2 \\ &\quad \quad \quad S = 0 \end{aligned}$$

$$1) \begin{aligned} &\alpha + 0(10) + \beta + 0(10) = 0 \rightarrow \alpha + \beta = 0 \\ &\quad \quad \quad S = \frac{a}{\mu} \\ &\quad \quad \quad P = \frac{b}{\mu} \end{aligned}$$

$$\begin{aligned} S &= \alpha + 0(10) + \beta + 0(10) = S + 1 = -\frac{1}{\mu} + 1 = \frac{1}{\mu} = \frac{a}{\mu} \rightarrow a = 1 \\ P &= (\alpha + 0(10))(\beta + 0(10)) = -\mu + (-\frac{1}{\mu}) + \frac{1}{\mu} = -\mu = \frac{b}{\mu} \rightarrow b = -\mu \\ &\rightarrow \left[\frac{a}{\mu} \right] = \left[-\frac{1}{\mu} \right] = \left[-\frac{\mu}{\mu} \right] = \left[-1 \right] \end{aligned}$$

$$\begin{aligned}
 \text{v)} \quad & a_1^T - a_1 - b_2 \geq 0 \xrightarrow{a_1^T \geq 0, a_1 - b_2 \geq 0} \frac{\pi_1^T}{\pi_1} \begin{pmatrix} \gamma_0 a_1^T - \gamma_0 a + b \\ \gamma_0 \beta^T - \gamma_0 \beta + b \end{pmatrix} \\
 & \xrightarrow{\pi_1 \geq 0} \gamma_0 \beta^T - \gamma_0 \beta + b \geq 0 \\
 & \rightarrow \gamma_0 \beta^T + \gamma_0 a^T - \gamma_0 \beta - b \geq 0 \rightarrow \gamma_0 \beta + \gamma_0 a + b - \gamma_0 \beta + \gamma_0 b \geq 0 \rightarrow \gamma_0 + \gamma_0 b \geq 0 \rightarrow \gamma_0 \geq -1 \\
 & \rightarrow \gamma_0 a^T - \gamma_0 a + 1 \geq 0 \text{ معادله} \\
 & \rightarrow |a - \beta| = \frac{1\sqrt{\delta}}{\gamma_0} \left(\frac{\gamma_0 \sqrt{\delta}}{\delta} \right)
 \end{aligned}$$

$$\begin{aligned}
 \text{A)} \quad & x^T - (a+1)x + a \geq 0 \rightarrow \begin{matrix} x_1 \geq 1 \\ x_2 \geq a \end{matrix} \rightarrow a \geq \mu \rightarrow p_{\mu} = \mu \\
 & x^T - (\mu a + 1)x + b \geq 0 \geq x^T - \gamma_0 x + b \geq 0 \rightarrow \begin{matrix} \gamma_0 \geq \mu \\ \beta = \mu \end{matrix} \\
 & \rightarrow b \geq \gamma_0 \rightarrow p_{\gamma} \geq b \geq \gamma_0 \mu \rightarrow p_{\mu} p_{\gamma} \geq \gamma_0 \mu \geq \mu \quad (\text{دایره})
 \end{aligned}$$

$$\begin{aligned}
 \text{a)} \quad & \Delta \geq 0 \rightarrow b^T - \sum a_i c_i \geq 0 \rightarrow \delta + m^T \geq 0 \text{ معادله} \\
 & \alpha^T + \beta^T \geq s^T - \gamma p \geq 1 + \gamma m^T + \gamma_2 \mu + \gamma_3 m^T \rightarrow (\alpha^T + \beta^T) \text{ کمتر از مقدار} \\
 & \text{زیرا } m=0 \text{ است} \\
 & \rightarrow \min (\alpha^T + \beta^T) \geq \mu + 0 \quad (\text{دایره})
 \end{aligned}$$

$$\begin{aligned}
 \text{10)} \quad & A(\gamma, y) \rightarrow x_5 \geq -1 \rightarrow y_5 \geq 1 \rightarrow \text{ext}(-1, 1) \\
 & B(-\delta, y) \rightarrow y \geq a x^T + \gamma a x + a + 1 \\
 & \rightarrow \alpha^T + \beta^T = \gamma \left(\frac{a+1}{a} \right) = -1 \rightarrow \gamma a + \gamma_2 - a \rightarrow a \geq \frac{\gamma}{-\mu} \quad (\text{دایره}) \\
 & \rightarrow y \geq -\frac{\gamma}{\mu} x^T - \frac{\gamma}{\mu} x + \frac{1}{\mu} \xrightarrow{x_1 \geq 0} \left(y \geq \frac{1}{\mu} \right) \text{ دایره}
 \end{aligned}$$