

उदाहरण 2 $A \in M_3(\mathbb{R})$ $1=3, 1, 2$

$$\chi_A(\lambda) = \lambda^3 - \text{tr}(A)\lambda^2 + C\lambda - |A|$$

$1=3, 1, 2$

$$C = \begin{vmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{vmatrix} + \begin{vmatrix} a_{22} & a_{23} \\ a_{32} & a_{33} \end{vmatrix} + \begin{vmatrix} a_{11} & a_{13} \\ a_{31} & a_{33} \end{vmatrix}$$

$\Sigma \pi \sigma$

उदाहरण 3 (उदाहरण 1 $a, b, c > 0$) $\alpha, \beta, \gamma \in \mathbb{R} \quad 1=3, 1, 2$

$$\alpha, \beta, \gamma > 0 \iff \alpha + \beta + \gamma > 0, \alpha\beta + \beta\gamma + \gamma\alpha > 0, \alpha\beta\gamma > 0$$

$\Sigma \pi \sigma$

उदाहरण 3 (असंख्य संख्याएँ) $1=3, 1, 2$ $\alpha, \beta, \gamma \in \mathbb{R}$

$$(i)' \quad \left(A \begin{pmatrix} x \\ y \\ z \end{pmatrix}, \begin{pmatrix} x \\ y \\ z \end{pmatrix} \right) \geq 0 \quad \left(\begin{pmatrix} x \\ y \\ z \end{pmatrix} \in \mathbb{R}^3 \right)$$

$$\iff (ii)' \quad \alpha, \beta, \gamma \geq 0$$

$$\implies (iii)' \quad a, b, c \geq 0, \begin{vmatrix} a & p \\ p & a \end{vmatrix}, \begin{vmatrix} b & q \\ q & b \end{vmatrix}, \begin{vmatrix} a & h \\ h & c \end{vmatrix} \geq 0, |A| \geq 0$$

उदाहरण 4 $\alpha, \beta, \gamma \in \mathbb{R} \quad 1=3, 1, 2$

$$\alpha, \beta, \gamma \geq 0 \iff \alpha + \beta + \gamma, \alpha\beta + \beta\gamma + \gamma\alpha, \alpha\beta\gamma \geq 0$$

$\Sigma \pi \sigma$

उदाहरण 5 $(i)' \iff (ii)' \iff (iii)' \quad \Sigma \pi \sigma \quad (i)' \iff (ii)', (ii)' \iff (iii)'$

$\Sigma \pi \sigma$