

$$\begin{array}{cc} 0 & 1 \\ 1 & 0 \end{array} \qquad \begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix} \qquad \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} \qquad \begin{Bmatrix} 1 & 0 \\ 0 & -1 \end{Bmatrix} \qquad \begin{vmatrix} a & b \\ c & d \end{vmatrix} \qquad \left\| \begin{array}{cc} i & 0 \\ 0 & -i \end{array} \right\|$$

$$A = \begin{pmatrix} a_{11}^2 & a_{12}^2 & a_{13}^2 \\ 0 & a_{22} & a_{23} \\ 0 & 0 & a_{33} \end{pmatrix}$$

$$A = \begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ 0 & & a_{nn} \end{bmatrix}_{n \times n}$$

$$\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & \\ 0 & 1 & 0 \\ & 0 & -1 \end{pmatrix}$$

$$\begin{pmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ & a_{22} & \cdots & a_{2n} \\ & & \ddots & \vdots \\ 0 & & & a_{nn} \end{pmatrix}$$

$$\begin{pmatrix} 1 & \frac{1}{2} & \cdots & \frac{1}{n} \\ \cdots & \cdots & \cdots & \cdots \\ m & \frac{m}{2} & \cdots & \frac{m}{n} \end{pmatrix}$$

复数  $z = (x,y)$  也可用矩阵  $\begin{pmatrix} x & -y \\ y & x \end{pmatrix}$  来表示。

$$\frac{\frac{1}{2}}{0} \bigg| \begin{array}{c} 0 \\ -\frac{a}{b}c \end{array}$$

$$\left( \begin{array}{ccc|ccc}
 a & \cdots & a & b & \cdots & b \\
 & \ddots & \vdots & \vdots & \cdots & \\
 & & a & b & & \\
 \hline
 0 & & & c & \cdots & c \\
 & & & \vdots & & \vdots \\
 & & & c & \cdots & c
 \end{array} \right) \left. \begin{array}{l} \\ \\ \\ \\ \end{array} \right\} \begin{array}{l} p \\ \\ \\ q \end{array}$$

$\underbrace{\hspace{10em}}_m \qquad \underbrace{\hspace{10em}}_n$