

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

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

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

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

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

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

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

$$\frac{\frac{1}{2}}{0}\bigg|\frac{0}{-\frac{a}{bc}}$$

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