

$$\begin{array}{cc} 0 & 1 \\ 1 & 0 \end{array} \qquad \begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix} \qquad \begin{bmatrix} 0 & -i \\ i & 0 \end{bmatrix} \qquad \left\{ \begin{array}{cc} 0 & -i \\ i & 0 \end{array} \right\} \qquad \left\| \begin{array}{cc} 0 & -i \\ i & 0 \end{array} \right\|$$

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

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

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

11111111

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

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

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

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

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