

$$A = \begin{pmatrix} a & 1 & 0 \\ 0 & b & 1 \\ 0 & 0 & c \end{pmatrix} \text{ 逆行列.}$$

14.

$$= \left(\begin{array}{ccc|ccc} a & 1 & 0 & 1 & 0 & 0 \\ 0 & b & 1 & 0 & 1 & 0 \\ 0 & 0 & c & 0 & 0 & 1 \end{array} \right) \begin{array}{l} abc \neq 0 \text{ 时} \\ a \neq 0 \wedge b \neq 0 \wedge c \neq 0 \end{array}$$

$$= \left(\begin{array}{ccc|ccc} 1 & \frac{1}{a} & 0 & \frac{1}{a} & 0 & 0 \\ 0 & 1 & \frac{1}{b} & 0 & \frac{1}{b} & 0 \\ 0 & 0 & 1 & 0 & 0 & \frac{1}{c} \end{array} \right)$$

$$= \left(\begin{array}{ccc|ccc} 1 & \frac{1}{a} & 0 & \frac{1}{a} & 0 & 0 \\ 0 & 1 & 0 & 0 & \frac{1}{b} & -\frac{1}{bc} \\ 0 & 0 & 1 & 0 & 0 & \frac{1}{c} \end{array} \right)$$

$$= \left(\begin{array}{ccc|ccc} 1 & 0 & 0 & \frac{1}{a} & -\frac{1}{ab} & -\frac{1}{abc} \\ 0 & 1 & 0 & 0 & \frac{1}{b} & -\frac{1}{bc} \\ 0 & 0 & 1 & 0 & 0 & \frac{1}{c} \end{array} \right)$$

$$\therefore A^{-1} = \frac{1}{abc} \begin{pmatrix} bc - c - 1 & & \\ 0 & ca & -a \\ 0 & 0 & ab \end{pmatrix}$$

$$A_{23} = -\det \begin{pmatrix} 0 & 1 & 0 \\ 2 & 0 & 1 \\ 1 & 1 & 1 \end{pmatrix} \\ = -\{0 - 2(1) + 1(1)\}$$