

H23-1

(1)

$$P(A \ b \ I) = (PA \ Pb \ P) \text{ あり.}$$

$$P = \begin{pmatrix} -1 & 0 & 0 & 0 \\ 2 & 1 & 0 & 0 \\ 2 & 2 & 1 & 0 \\ 1 & 1 & 0 & 1 \end{pmatrix}$$

(2)

$$\det(PA) = 2, \det(P) = -1 \text{ あり.}$$

$$\det(A) = \frac{2}{\det(P)} = -2$$

(3)(4)

基本変形あり

$$\begin{pmatrix} 1 & 0 & 0 & 0 & -9 & -\frac{5}{2} & -\frac{5}{2} & -2 & \frac{1}{2} \\ 0 & 1 & 0 & 0 & 0 & \frac{1}{2} & -\frac{1}{2} & -1 & \frac{1}{2} \\ 0 & 0 & 1 & 0 & 5 & \frac{3}{2} & \frac{3}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 0 & 1 & 2 & \frac{1}{2} & \frac{1}{2} & 0 & \frac{1}{2} \end{pmatrix}$$

\parallel
 x
 \parallel
 A^{-1}