4.1.13 $G = GL_2(\mathbb{C})$ □□□. □□ $A \in G$ □□□□, □□□□□□□□□□□.
(1) $A = \begin{pmatrix} 2 & 0 \ 0 & 1 \ \end{pmatrix}$

□□ 4.1.26 (2) □□□□□□G□□□□H□□□□□□□□□□□□□
$Z_G(H) = {g\in{G} | hg = gh, \forall{h} \in{H}}$
□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□.
$Z_G(h) = {g\in{G} | hg = gh, \forall{h} \in{G}}$

$B\in\begin{pmatrix} a & b \ c & d \ \end{pmatrix}$, $a, b, c, d \in \mathbb{C}$ □□□.
□□□, $AB=BA$ □□□
$\begin{pmatrix} 2a & 2b \ c & d \ \end{pmatrix} = \begin{pmatrix} 2a & b \ 2c & d \ \end{pmatrix}$ □□□
$b = 0, c = 0$ □□□□□
$Z_G(A) = {\begin{pmatrix} a & 0 \ 0 & b \ \end{pmatrix} | a, b \in \mathbb{C^{X}}}$ □□□.

□□)
□□□□□□□□a, b □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

(2) $A = \begin{pmatrix} 2 & 1 \ 0 & 2 \ \end{pmatrix}$

(1) □□□□
$\begin{pmatrix} 2a + c& 2b + d \ 2c & 2d \ \end{pmatrix} = \begin{pmatrix} 2a & a + 2b \ 2c & c + 2d \ \end{pmatrix}$ □□□
$a = d, c = 0$ □□□□□
$Z_G(A) = {\begin{pmatrix} a & b \ 0 & a \ \end{pmatrix} | a \in \mathbb{C^{X}}, b \in \mathbb{C}}$ □□□.