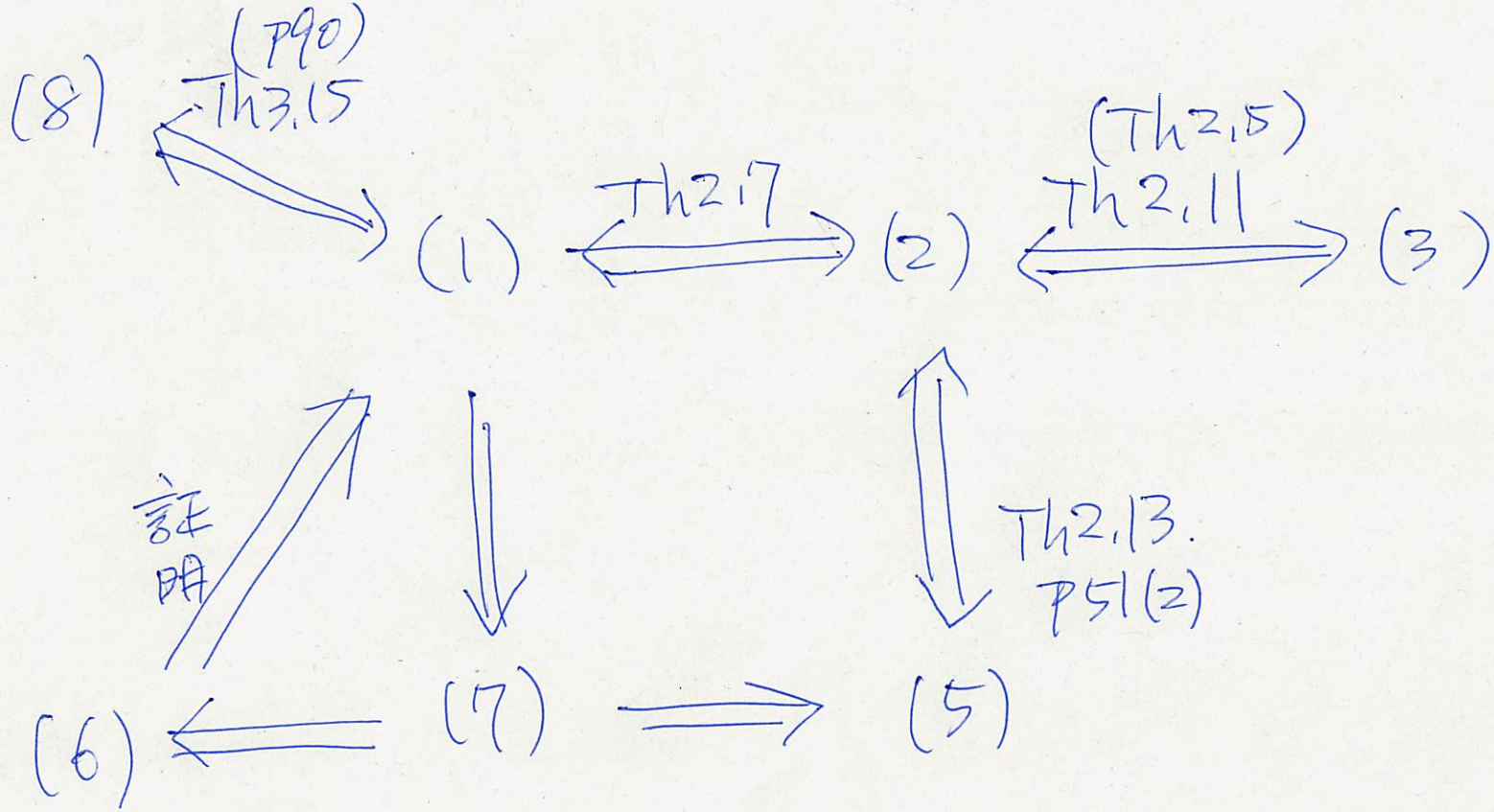
(8)
(P90)
Th3.15
(1)
Th2.7
(2)
(Th2.5)
Th2.11
(3)
証明
Th2.13.
P51(2)
(6)
(7)
(5)

(6) $\Rightarrow$ (1)

$$\begin{cases} A\alpha_1 = \varepsilon_1 \\ \quad\vdots \\ A\alpha_n = \varepsilon_n \end{cases}$$

$$A(\alpha_1 \cdots \alpha_n) = (\varepsilon_1 \cdots \varepsilon_n) = E.$$

Th 2.4 知. A: 正則

(1) $\Rightarrow$ (8) $\quad \det(A)\det(A^{-1}) = \det(A \cdot A^{-1}) = \det E = 1$

Th 3.9 (P73)

$\therefore \det A \neq 0$.