5.

$\Pi_0 = \Pi_{AP} = \{\{S_0, S_4, S_5, S_7, S_8\}, \{S_1, S_2, S_3, S_6\}\}$

$\Pi_1:$ $B_1 = \{S_0, S_4, S_5, S_7, S_8\}$, $S_0 \not\sim S_4$ so split.

$B_2 = \{S_1, S_2, S_3, S_6\}$, $S_1 \not\sim S_2$ So split.

$\Pi_1 = \{\{S_0\}, \{S_4, S_5, S_7, S_8\}, \{S_2\}, \{S_1, S_3, S_6\}\}$

$\Pi_2:$ $B_2 = \{S_4, S_5, S_7, S_8\}$, $S_4 \sim S_5 \sim S_7 \sim S_8$, next.

$B_4 = \{S_1, S_3, S_6\}$, $S_1 \not\sim S_3$ so split.

$\Pi_2 = \{\{S_0\}, \{S_4, S_5, S_7, S_8\}, \{S_2\}, \{S_3\}, \{S_1, S_6\}\}$

$\Pi_3:$ $B_2 = \{S_4, S_5, S_7, S_8\}$, $S_4 \sim S_5 \sim S_7 \sim S_8$, next.

$B_5 = \{S_1, S_6\}$, $S_1 \sim S_6$. No block can further be

refined.

$\sim_{TS} = R_{\Pi_3} = \{(S_i, S_i), (S_4, S_5), (S_4, S_7), (S_4, S_8),$

$(S_5, S_7), (S_7, S_8), (S_1, S_6)\}$

$TS/\sim :$