

Proof of ① : Again by the symmetry,

(i) type 1

$\{E_1, \dots, E_6\}$.

$\Rightarrow \{E_1, \dots, E_5\}$ has the unique line G_6 ...etc.

(ii) type 2.

$\{E_1, E_2, E_3, F_{45}, F_{56}, F_{46}\}$.

① $\{E_1, E_2, E_3, F_{56}, F_{45}\}$ has the unique line G_5

② $\{E_1, E_2, F_{45}, F_{56}, F_{46}\}$ has the unique line F_{12}

(iii) type 3

$\{E_1, G_1, F_{23}, F_{24}, F_{25}, F_{26}\}$

① $\{F_{23}, F_{24}, F_{25}, F_{26}, E_1\}$ has the unique line G_2

② $\{F_{23}, F_{24}, F_{25}, F_{26}, G_1\}$ has the unique line E_2

③ $\{F_{23}, F_{24}, F_{25}, E_1, G_1\}$ has the unique line F_{16}

(iv) type 4

$\{G_1, G_2, G_3, F_{45}, F_{56}, F_{46}\}$

① $\{G_1, G_2, G_3, F_{45}, F_{56}\} \Rightarrow E_5$.

② $\{G_1, G_2, F_{45}, F_{56}, F_{46}\} \Rightarrow F_{12}$

(v) type 5

$\{G_1, G_2, G_3, G_4, G_5, G_6\}$.

$\Rightarrow \{G_1, G_2, \dots, G_5\} \Rightarrow G_6$.

Let $\{\tau_1, \dots, \tau_6\}$ be a set of six disjoint lines on S .

Define $\phi: K \rightarrow K$ by