

Note in particular that every line of S meets exactly ten other lines; some other interesting aspects of this configuration of 27 lines are:

1. There are exactly 12 sets of six disjoint lines on S : these are

$$\{E_i\} \quad (1),$$

$$\{E_i, E_j, E_k, F_{em}, F_{mn}, F_{en}\} \quad (20),$$

$$\{E_i, G_i, F_{je}, F_{jk}, F_{jm}, F_{jn}\} \quad (30)$$

$$\{G_i, G_j, G_k, F_{em}, F_{mn}, F_{en}\} \quad (20),$$

and

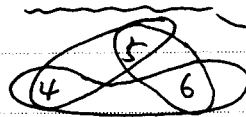
$$\{G_i\} \quad (1).$$

For example, E_1 meets with $F_{ij}, j=2, \dots, 6$, and $G_j, j=2, \dots, 6$.
 F_{12} meets with E_1, E_2, G_1, G_2 . $\# \{F_{ij}\} = 6$ ($\because 4C_2 = \frac{4 \cdot 3}{2} = 6$)

G_1, E_j 's F_{ij} 's $j=2, \dots, 6$.

Clearly $\{E_i\}, \{G_i\}$ obvious.

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



$$6C_3 = \frac{6 \cdot 5 \cdot 4}{6} = 120$$

$$\# \{E_i, E_j, E_k, F_{em}, F_{mn}, F_{en}\} = 20$$

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

Point : \Rightarrow No chance for next (a_4, a_5) .