

conditions on cubics. Thus if $P_1, P_2, P_3, \dots, P_7$ fail to impose independent conditions on cubics, every cubic passing through P_2, P_3, \dots, P_7 must contain P_1 , since by the same argument above, P_2, P_3, \dots, P_7 impose independent conditions on cubics.

Consider the line $L_{13} = L$. say P_4, P_5

(i) L_{31} contain two of P_4, \dots, P_7 . \checkmark $P_2 \notin L_{13}$, otherwise $P_1 = P_2$ * Contradiction.

$L_{23} + L_{46} + L_{57}$ passes P_2, P_3, \dots, P_7

$\Rightarrow P_1 \in L_{23} + L_{46} + L_{57} \Rightarrow P_1 \notin L_{23}$

\Rightarrow (a) $P_1 \in L_{46} \Rightarrow P_3 \in L_{46}$

$\Rightarrow P_1, P_2, P_4, P_6, P_5 \in L$. five are collinear.

(b) $P_1 \in L_{57} \Rightarrow P_3 \in L_{46}$

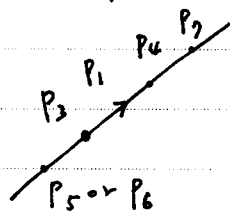
$\Rightarrow P_1, P_2, P_4, P_6, P_5 \in L$.

(ii) L_{13} contain one of P_4, \dots, P_7 , say $P_6 \in L_{13}$.

Consider $L_{23} + L_{47} + L_{56}$ and $L_{23} + L_{45} + L_{67}$

$\Rightarrow P_1 \in L_{23} + L_{47} + L_{56}$ and $P_1 \in L_{23} + L_{45} + L_{67}$

\Rightarrow (a) $P_1 \in L_{47}$ and L_{45} or L_{67} .



(b) $P_1 \in L_{56}$ and $P_1 \in L_{45}$ or L_{67} .

