3.6. Solution: We can assume $p_1, p_2, p_3$ are three distinct points, for otherwise the proof is trivial. Let $a_{ij}$ be the intersection of $L_{ij}$ and $L_{ji}$. Let $C = L_{12}L_{23}L_{31}$, $D = L_{21}L_{32}L_{13}$. Then the degrees of $C$ and $D$ are 3, and their intersection points are exactly $p_1, p_2, p_3, q_1, q_2, q_3, a_{12}, a_{23}, a_{31}$. By hypothesis, exactly three points $q_1, q_2, q_3$ lie on the line $M$. Proposition 3.14 says that the remaining points $p_1, p_2, p_3, a_{12}, a_{23}, a_{31}$ lie on a curve $E$ of degree at most 2. By hypothesis, $p_1, p_2, p_3$ lie on the line $L$, using Bezout’s Theorem, we see that $L$ is a component of $E$, and hence $E$ is a union of two lines. The other component of $E$, which is a line, must pass through $a_{12}, a_{23}, a_{31}$ since $a_{12}, a_{23}, a_{31}$ do not lie on $L$. 