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Three mysterious points of triangle

Appendix

28. Try to find the homothetic center in Problem 19.
29. The Euler line of triangles AIB, BIC and CIA concur at a point lying on the Euler line of triangle ABC. (This point passes by the name of *Schiffler point.*)
30. The perspector of triangles $L_1L_2L_3$ and $A_0B_0C_0$ is the Schiffler point of triangle $A_0B_0C_0$.
31. The perspector of triangles $L_1L_2L_3$ and $H_1H_2H_3$ lies on HL_0, where L_0 is the centroid of triangle $L_1L_2L_3$. Try to find it.
32. Triangle $L_1L_2L_3$ is orthological to triangle with vertices at the feet of bisectors of ΔABC. Find the orthologic center.
33. Triangle with vertices at the feet of bisectors of ΔABC is orthological to triangle $L_1L_2L_3$. Find the orthologic center.
34. The Nagel triangle is orthological to triangle $L_1L_2L_3$. Find the orthologic center. (*The Nagel triangle* is triangle with vertices at the touch points of excircles.)
35. Triangle $L_1L_2L_3$ is orthological to the Nagel triangle. Find the orthologic center.