

Problem 25

The Feuerbach Point is the Perspector of the Euler Triangle and the Triangle of the Weill Points of the Corner Triangles of the Orthocenter

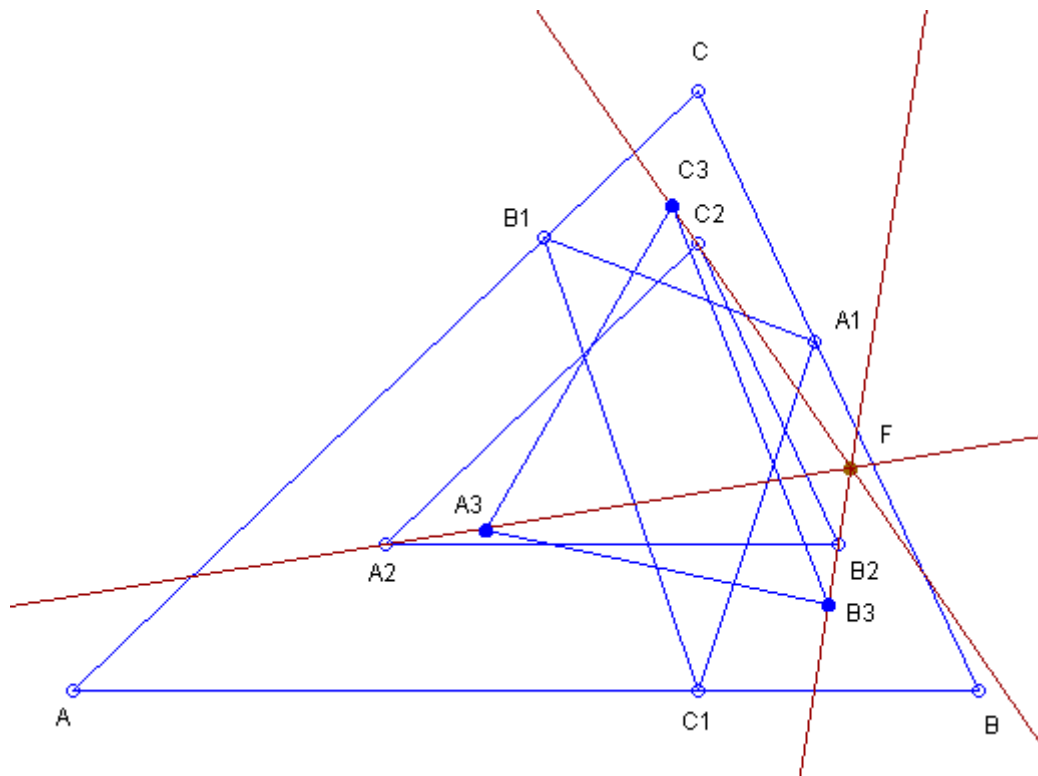
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Prove the following computer-generated theorem:

THEOREM. The Feuerbach Point is the Perspector of the Euler Triangle and the Triangle of the Weill Points of the Corner Triangles of the Orthocenter.

The reader may find the definitions in [1-4]. Recall that the Weill Point of a triangle is the Centroid of the Intouch Triangle of the triangle.

See the Figure:



$A_1B_1C_1$ - Orthic Triangle = Cevian Triangle of the Orthocenter;

$A_2B_2C_2$ - Euler Triangle;
 A_3 - Weill Point of triangle AB_1C_1 ;
 B_3 - Weill Point of triangle BC_1A_1 ;
 C_3 - Weill Point of triangle CA_1B_1 ;
 $A_3B_3C_3$ - Triangle of the Weill Points of the Corner Triangles of the Orthocenter;
The lines A_2A_3 , B_2B_3 , and C_2C_3 concur at the Feuerbach Point F, that is, the Feuerbach Point is the Perspector of the Euler Triangle and the Triangle of the Weill Points of the Corner Triangles of the Orthocenter.

References

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