

Problem 31

The Feuerbach Point is the Homothetic Center of the Outer Yff Triangle and the Triangle of the Circumcenters of the Anticevian Corner Triangles of the Centroid

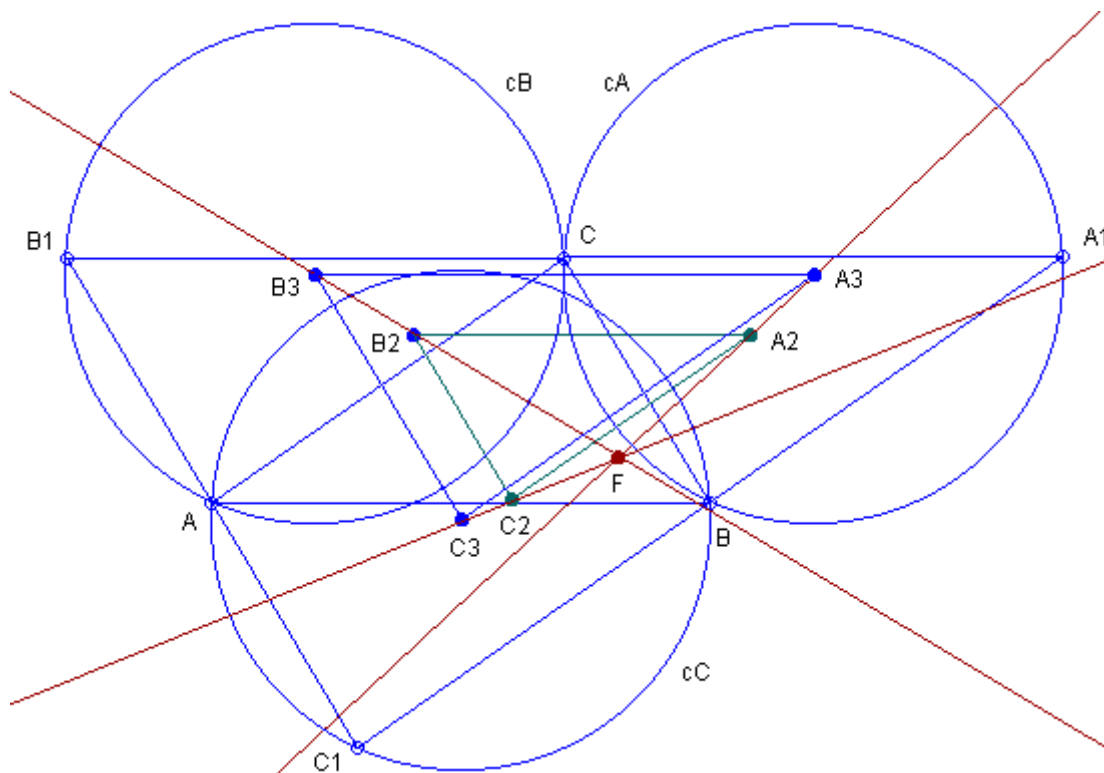
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Prove the following computer-generated theorem:

THEOREM. The Feuerbach Point is the Homothetic Center of the Outer Yff Triangle and the Triangle of the Circumcenters of the Anticevian Corner Triangles of the Centroid.

The reader may find the definitions in [1-4].

See the Figure:



$A_1B_1C_1$ - Anticomplementary Triangle = Anticevian Triangle of the Centroid;
 $A_2B_2C_2$ - Outer Yff Triangle;

cA - Circumcircle of triangle A_1BC ;
 cB - Circumcircle of triangle B_1CA ;
 cC - Circumcircle of triangle C_1AB ;
 A_3 - Circumcenter of triangle A_1BC ;
 B_3 - Circumcenter of triangle B_1CA ;
 C_3 - Circumcenter of triangle C_1AB ;
 $A_3B_3C_3$ - Triangle of the Circumcenters of the Anticevian Corner Triangles of the Centroid;
The Feuerbach Point F is the Homothetic Center of the Outer Yff Triangle and the Triangle of the Circumcenters of the Anticevian Corner Triangles of the Centroid.

References

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