

Problem 1.

The Feuerbach Point lies on the Circle through the Symmedian Point, the Internal Center of Similitude of the Incircle and the Circumcircle and the Grinberg Point

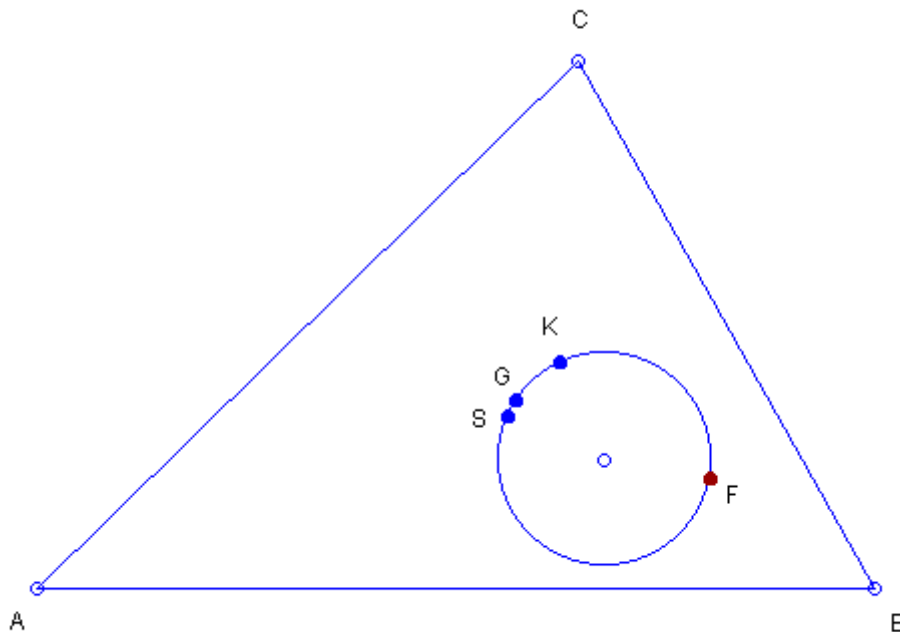
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Prove the following computer-generated theorem:

THEOREM. The Feuerbach Point lies on the Circle through the Symmedian Point, the Internal Center of Similitude of the Incircle and the Circumcircle and the Grinberg Point.

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

Given a triangle, the Symmedian point, the Internal Center of Similitude of the Incircle and the Circumcircle and the Grinberg point define a circle passing through these points. The theorem states that the Feuerbach point lies on this circle. See the Figure:



K - Symmedian point;

S - Internal Center of Similitude of the Incircle and the Circumcircle;

G - Grinberg point;
F - Feuerbach point.

Références

1. Quim Castellsaguer, The Triangles Web,
<http://www.xtec.es/~qcastell/ttw/ttweng/portada.html>
2. D. Dekov, Computer-Generated Encyclopedia of Euclidean Geometry, First Edition,
2006, available at the Web: <http://www.dekovsoft.com/>.
3. D. Dekov, Grinberg Point, in this journal, 2007.
4. Eric W. Weisstein, MathWorld - A Wolfram Web Resource.
<http://mathworld.wolfram.com/>