

Yff Center of Conguence

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Abstract. By using the computer program "Machine for Questions and Answers", we find properties of the Yff Center of Conguence.

For the definition of the Yff Center of Conguence see the encyclopedia [2].

Given a point, the Machine for Questions and Answers produces theorems related to properties of the point. The Machine for Questions and Answers produces theorems related to properties of the Yff Center of Conguence:

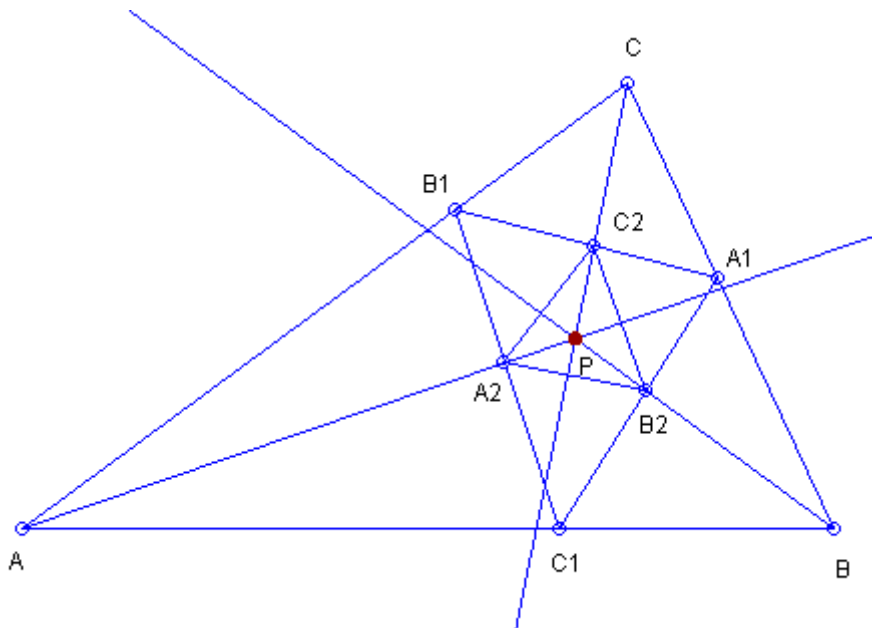
Yff Center of Conguence = 'Internal Center of Similitude of the Incircle and the Circumcircle' of the Intouch Triangle.

Yff Center of Conguence = 'Internal Center of Similitude of the Incircle and the Circumcircle' of the Yff Central Triangle.

Yff Center of Conguence = Internal Center of Similitude of the Incircle and the Incircle of the Intouch Triangle.

Yff Center of Conguence = Perspector of Triangle ABC and the Incentral Triangle of the Intouch Triangle.

See the Figure:



$A_1B_1C_1$ - Intouch Triangle;

$A_2B_2C_2$ - Incentral Triangle of the Intouch Triangle;

P - Yff Center of Congruence = Perspector of triangles ABC and $A_2B_2C_2$.

Notes

1. Eric Danneels [2] proved that the Congruent Isoscelizers Point is the Perspector of the Intouch Triangle of the Intouch Triangle. The computer shows that similar result holds for the second remarkable Yff point - the Yff Center of Congruence.

Yff Center of Congruence = Homothetic Center of the Intouch Triangle and the Yff Central Triangle.

Yff Center of Congruence = Homothetic Center of Triangle ABC and the Triangle of the Yff Centers of Congruence of the Corner Triangles of the Centroid.

Yff Center of Congruence = Perspector of Triangle ABC and the Triangle of the reflections of the Yff Center of Congruence in the vertices of the Cevian Triangle of the Yff Center of Congruence.

Yff Center of Congruence = Perspector of Triangle ABC and the Triangle of the reflections of the Yff Center of Congruence in the vertices of the Anticevian Triangle of the Yff Center of Congruence.

Yff Center of Congruence = Perspector of Triangle ABC and the Triangle of the reflections of the vertices of the Cevian Triangle of the Yff Center of Congruence in the Yff Center of Congruence.

Yff Center of Congruence = Perspector of Triangle ABC and the Triangle of the reflections of the vertices of the Anticevian Triangle of the Yff Center of Congruence in the Yff Center of Congruence.

Yff Center of Conguence = Homothetic Center of the Incentral Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Incentral Triangle.

Yff Center of Conguence = Homothetic Center of the Medial Triangle and the Triangle of the Centroids of the Triangulation Triangles of the Yff Center of Conguence.

Yff Center of Conguence = Homothetic Center of the Medial Triangle and the Triangle of the Yff Centers of Conguence of the Anticevian Corner Triangles of the Centroid.

Yff Center of Conguence = Homothetic Center of the Medial Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Medial Triangle.

Yff Center of Conguence = Homothetic Center of the Orthic Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Orthic Triangle.

Yff Center of Conguence = Homothetic Center of the Symmedial Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Symmedial Triangle.

Yff Center of Conguence = Homothetic Center of the Intouch Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Intouch Triangle.

Yff Center of Conguence = Homothetic Center of the Extouch Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Extouch Triangle.

Yff Center of Conguence = Homothetic Center of the Excentral Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Excentral Triangle.

Yff Center of Conguence = Homothetic Center of the Anticomplementary Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Anticomplementary Triangle.

Yff Center of Conguence = Homothetic Center of the Tangential Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Tangential Triangle.

Yff Center of Conguence = Homothetic Center of the Yff Central Triangle and the Stevanovic Triangle of the Orthocenters of the Triangulation triangles of the Incenter.

Yff Center of Conguence = Homothetic Center of the Yff Central Triangle and the Stevanovic Triangle of the Gergonne Points of the Triangulation triangles of the Center of the Outer Soddy Circle.

Yff Center of Conguence = Homothetic Center of the Yff Central Triangle and the Stevanovic Triangle of the Gergonne Points of the Triangulation triangles of the Center of the Inner Soddy Circle.

Yff Center of Conguence = Homothetic Center of the Yff Central Triangle and the Triangle of the reflections of the Yff Center of Conguence in the vertices of the Intouch Triangle.

Yff Center of Conguence = Isogonal Conjugate of the Product of the Mittenpunkt and the

Yff Center of Conguence.

The Yff Center of Conguence lies on the Line through the First de Villiers Point and the Outer Eppstein Point.

The Yff Center of Conguence lies on the Line through the Radical Center of the Malfatti Circles and the Second Malfatti-Rabinowitz Point.

The Yff Center of Conguence lies on the Line through the Dimovski Point and the External Center of Similitude of the Incircle and the Circumcircle.

The Yff Center of Conguence lies on the Line through the Incenter and the Incenter of the Intouch Triangle.

The Yff Center of Conguence lies on the Line through the Incenter and the Nagel Point of the Excentral Triangle.

The Yff Center of Conguence lies on the Line through the Congruent Isoscelizers Point and the Isogonal Conjugate of the Mittenpunkt.

The Yff Center of Conguence lies on the Line through the Congruent Isoscelizers Point and the Perspector of Triangle ABC and the Extouch Triangle of the Intouch Triangle.

The Yff Center of Conguence lies on the Line through the Incenter of the Intouch Triangle and the Nagel Point of the Excentral Triangle.

The Yff Center of Conguence lies on the Line through the Isogonal Conjugate of the Mittenpunkt and the Perspector of Triangle ABC and the Extouch Triangle of the Intouch Triangle.

Invitation

The reader is invited to submit a note/paper containing

- synthetic proofs of theorems from this paper,
- or, applications of theorems from this paper,
- or, additional references related to this paper.

Definitions

We use the definitions in accordance with [1 - 6] and papers published in this journal.

The Level

The Machine for Questions and Answers is used to produce results in this paper. Currently the Machine has 6 levels of depths - 0,1,2,3,4,5. We use for this paper the level 0, that is, the Machine produces only elementary results. If we need deeper investigation, we have to use a level bigger than 0. Since the Machine for Questions and Answers produces too many results, it is suitable we to use bigger levels upon request, that is, for specific questions.

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