

Outer Vecten Point

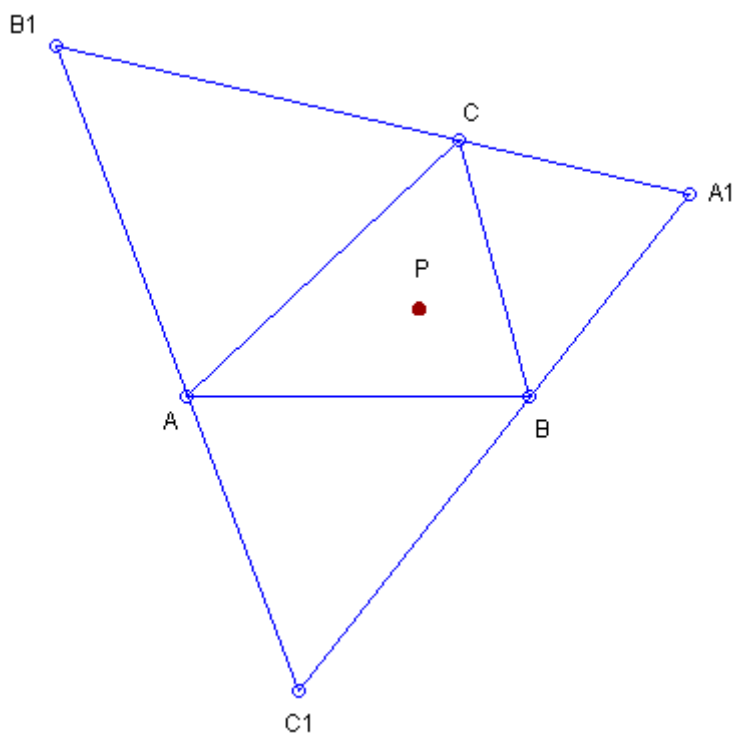
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Abstract. By using the computer program "Machine for Questions and Answers", we find properties of the Outer Vecten Point.

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 Outer Vecten Point:

Outer Vecten Point = Outer Kenmotu Point of the Antipedal Triangle of the Outer Vecten Point.

See the Figure:



$A_1B_1C_1$ - Antipedal Triangle of the Outer Vecten Point;
 P - Outer Vecten Point = Outer Kenmotu Point of triangle $A_1B_1C_1$.

Outer Vecten Point = Orthocenter of the Outer Vecten Triangle.

Outer Vecten Point = Center of the First Droz-Farny Circle of the Outer Vecten Triangle.

Outer Vecten Point = Internal Center of Similitude of the Cosine Circle and the Nine-Point Circle.

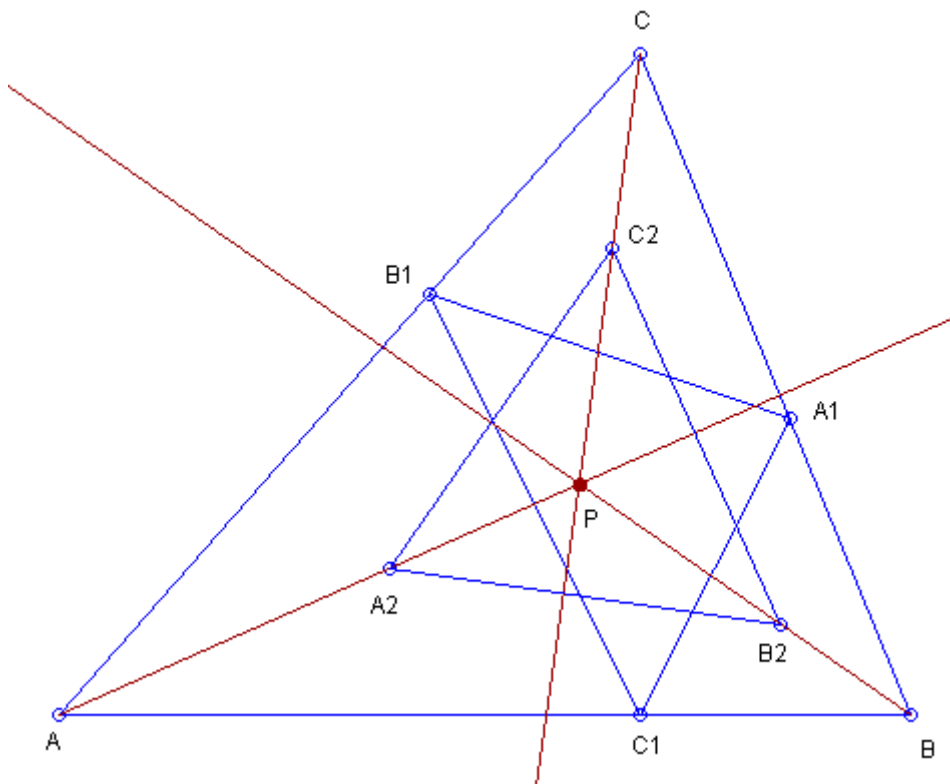
Outer Vecten Point = Perspector of Triangle ABC and the Triangle of the Outer Vecten Points of the Triangulation Triangles of the Outer Vecten Point.

Outer Vecten Point = Perspector of Triangle ABC and the Stevanovic Triangle of the Outer Vecten Points of the Triangulation triangles of the Outer Vecten Point.

Outer Vecten Point = Homothetic Center of Triangle ABC and the Triangle of the Outer Vecten Points of the Corner Triangles of the Centroid.

Outer Vecten Point = Perspector of Triangle ABC and the Triangle of the Inner Kenmotu Points of the Corner Triangles of the Orthocenter.

See the Figure:



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

A_2 - Inner Kenmotu Point of triangle AB_1C_1 ;

B_2 - Inner Kenmotu Point of triangle BC_1A_1 ;

C_2 - Inner Kenmotu Point of triangle CA_1B_1 ;

$A_2B_2C_2$ - Triangle of the Inner Kenmotu Points of the Corner Triangles of the Orthocenter;

P - Outer Vecten Point = Perspector of triangles ABC and $A_2B_2C_2$.

Outer Vecten Point = Perspector of Triangle ABC and the Triangle of the reflections of the Inner Kenmotu Point in the sides of the Excentral Triangle.

Outer Vecten Point = Homothetic Center of the Incentral Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Incentral Triangle.

Outer Vecten Point = Homothetic Center of the Medial Triangle and the Triangle of the Centroids of the Triangulation Triangles of the Outer Vecten Point.

Outer Vecten Point = Homothetic Center of the Medial Triangle and the Triangle of the Outer Vecten Points of the Anticevian Corner Triangles of the Centroid.

Outer Vecten Point = Homothetic Center of the Medial Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Medial Triangle.

Outer Vecten Point = Homothetic Center of the Orthic Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Orthic Triangle.

Outer Vecten Point = Homothetic Center of the Symmedial Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Symmedial Triangle.

Outer Vecten Point = Homothetic Center of the Intouch Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Intouch Triangle.

Outer Vecten Point = Homothetic Center of the Extouch Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Extouch Triangle.

Outer Vecten Point = Homothetic Center of the Excentral Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Excentral Triangle.

Outer Vecten Point = Homothetic Center of the Anticomplementary Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Anticomplementary Triangle.

Outer Vecten Point = Homothetic Center of the Tangential Triangle and the Triangle of the reflections of the Outer Vecten Point in the vertices of the Tangential Triangle.

Outer Vecten Point = Isogonal Conjugate of the Inner Kenmotu Point.

Outer Vecten Point = Isogonal Conjugate of the Outer Eppstein Point of the Lucas Central Triangle.

Outer Vecten Point = Isogonal Conjugate of the Reflection of the Outer Kenmotu Point in the Third Power Point.

Outer Vecten Point = Isogonal Conjugate of the Product of the Centroid and the Inner Kenmotu Point.

Outer Vecten Point = Isogonal Conjugate of the Internal Center of Similitude of the Circumcircle and the Cosine Circle.

Outer Vecten Point = Isogonal Conjugate of the Internal Center of Similitude of the Cosine Circle and the Radical Circle of the Lucas Circles.

Outer Vecten Point = Isogonal Conjugate of the Internal Center of Similitude of the Gallatly Circle and the Lemoine Circle.

Outer Vecten Point = Isogonal Conjugate of the Internal Center of Similitude of the Fermat-Tucker Circle and the Napoleon-Tucker Circle.

Outer Vecten Point = Isogonal Conjugate of the Internal Center of Similitude of the $\text{Arctan}(1/2)$ Tucker Circle and the $\text{Arctan}(2)$ Tucker Circle.

Outer Vecten Point = Isogonal Conjugate of the Internal Center of Similitude of the $\text{Arctan}(1/3)$ Tucker Circle and the $\text{Arctan}(3)$ Tucker Circle.

Outer Vecten Point = Isogonal Conjugate of the External Center of Similitude of the Circumcircle and the Radical Circle of the Lucas Circles.

Outer Vecten Point = Isogonal Conjugate of the Inverse of the Outer Kenmotu Point in the Brocard Circle.

Outer Vecten Point = Complement of the Perspector of the Anticomplementary Triangle and the Inner Vecten Triangle.

Outer Vecten Point = Complement of the Perspector of the Antipedal Triangle of the Orthocenter and the Inner Vecten Triangle.

Outer Vecten Point = Isogonal Conjugate of the Perspector of the Cevian Triangle of the Inner Kenmotu Point and the Circumcevian Triangle of the Inner Kenmotu Point.

Outer Vecten Point = Isogonal Conjugate of the Perspector of the Orthic Triangle and the Inner Vecten Triangle.

Outer Vecten Point = Isogonal Conjugate of the Perspector of the Cevian Triangle of the Malfatti-Moses Point and the Outer Vecten Triangle.

Outer Vecten Point = Isogonal Conjugate of the Perspector of the Anticevian Triangle of the Outer Kenmotu Point and the Pedal Triangle of the Orthocenter.

Outer Vecten Point = Isogonal Conjugate of the Perspector of the Anticevian Triangle of the Inner Kenmotu Point and the Circumcevian Triangle of the Inner Kenmotu Point.

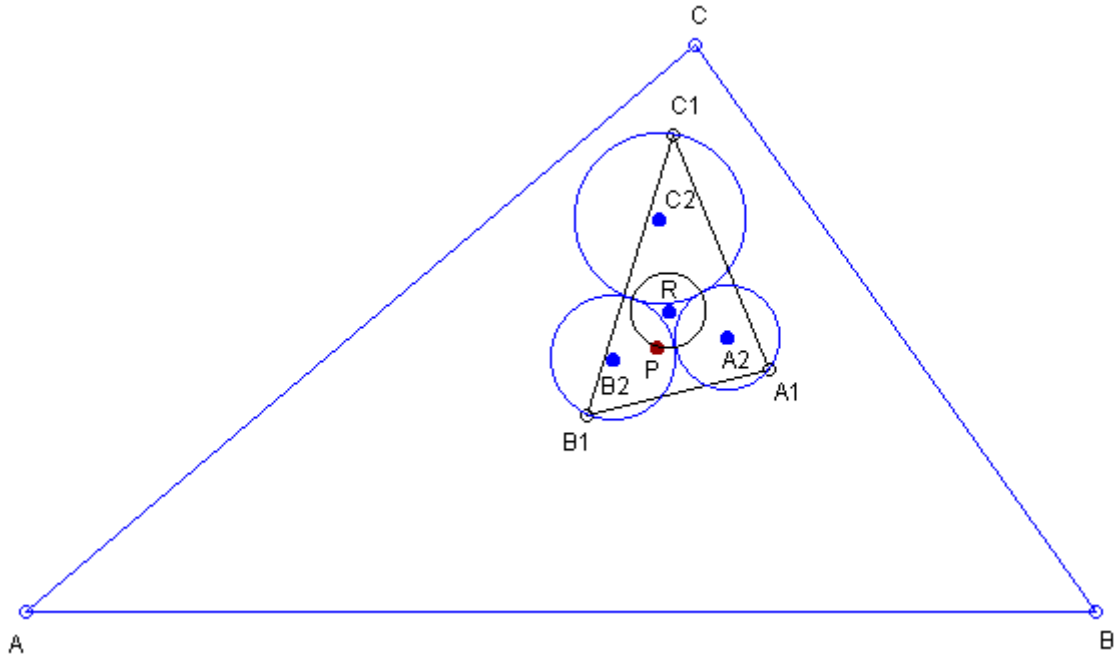
Outer Vecten Point = Isogonal Conjugate of the Perspector of the Tangential Triangle and the Lucas Central Triangle.

Outer Vecten Point = Isogonal Conjugate of the Perspector of the Anticevian Triangle of the

Outer Kenmotu Point and the Inner Vecten Triangle.

The Outer Vecten Point lies on the Radical Circle of the Lucas Circles of the Fourth Brocard Triangle.

See the Figure:



$A_1B_1C_1$ - Fourth Brocard Triangle;
 (A_2) , (B_2) , (C_2) - Lucas Circles of the Fourth Brocard Triangle;
 (R) - Radical Circle of the circles (A_2) , (B_2) , and (C_2) ;
 P - Outer Vecten Point - lies on the circle (R) .

The Outer Vecten Point lies on the Orthocentroidal Circle of the Outer Vecten Triangle.

The Outer Vecten Point lies on the Line through the Centroid and the Outer Kenmotu Point.

The Outer Vecten Point lies on the Line through the Nine-Point Center and the Symmedian Point.

The Outer Vecten Point lies on the Line through the Nine-Point Center and the Prasolov Point.

The Outer Vecten Point lies on the Line through the Prasolov Point and the Symmedian Point.

The Outer Vecten Point lies on the Line through the Inner Vecten Point and the Symmedian Point.

The Outer Vecten Point lies on the Line through the Inner Vecten Point and the Nine-Point

Center.

The Outer Vecten Point lies on the Line through the Inner Vecten Point and the Prasolov Point.

The Outer Vecten Point lies on the Line through the Inner Kenmotu Point and the Orthocenter.

The Outer Vecten Point lies on the Line through the Inner Kenmotu Point and the Malfatti-Moses Point.

The Outer Vecten Point lies on the Line through the Malfatti-Moses Point and the Orthocenter.

The Outer Vecten Point lies on the Line through the Nine-Point Center and the Orthocenter of the Tangential 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 - 5] 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.

Thanks

The figures in this note are produced by using the program C.a.R. (Compass and Ruler), an amazing program created by Rene Grothmann. The Grothmann's program is available for download in the Web: [Rene Grothmann's C.a.R.](http://www.xtec.es/~qcastell/ttw/ttweng/portada.html). It is free and open source. The reader may verify easily the statements of this paper by using C.a.R. Many thanks to Rene Grothmann for his wonderful program.

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