Symmedian Point

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

Symmedian Point = Centroid of the Pedal Triangle of the Symmedian Point.

Symmedian Point = Symmedian Point of the Circumcevian Triangle of the Symmedian Point.

Symmedian Point = Symmedian Point of the Circumcevian Triangle of the Schoute Center.

Symmedian Point = Symmedian Point of the Circumcevian Triangle of the First Beltrami Point.

Symmedian Point = Symmedian Point of the Circumcevian Triangle of the Second Beltrami Point.

Symmedian Point = Steiner Point of the First Brocard Triangle.

Symmedian Point = Symmedian Point of the Fourth Brocard Triangle.

Symmedian Point = Steiner Point of the Inner Gallatly-Kiepert Triangle.

Symmedian Point = Second Brocard Point of the First Lemoine-Tucker Triangle.

Symmedian Point = First Brocard Point of the Second Lemoine-Tucker Triangle.

Symmedian Point = Circumcenter of the First Cosine-Tucker Triangle.

Symmedian Point = Circumcenter of the Second Cosine-Tucker Triangle.

Symmedian Point = Center of the Cosine Circle.

Symmedian Point = Center of the Circumcircle of the First Cosine-Tucker Triangle.

Symmedian Point = Center of the Second Droz-Farny Circle of the First Cosine-Tucker Triangle.

Symmedian Point = Center of the Circumcircle of the Second Cosine-Tucker Triangle.

Symmedian Point = Center of the Second Droz-Farny Circle of the Second Cosine-Tucker Triangle.

Symmedian Point = Center of the Outer Apollonius Circle of the Lucas Circles of the First Cosine-Tucker Triangle.

Symmedian Point = Center of the Outer Apollonius Circle of the Lucas Circles of the Second Cosine-Tucker Triangle.

Symmedian Point = Center of the Cosine Circle of the Circumcevian Triangle of the Symmedian Point.

Symmedian Point = Center of the Cosine Circle of the Circumcevian Triangle of the Schoute Center.

Symmedian Point = Center of the Cosine Circle of the Circumcevian Triangle of the First Beltrami Point.

Symmedian Point = Center of the Cosine Circle of the Circumcevian Triangle of the Second Beltrami Point.

Symmedian Point = Center of the Cosine Circle of the Fourth Brocard Triangle.

Symmedian Point = Midpoint between the Perspector of the Orthic Triangle and the Anticomplementary Triangle and the Symmedian Point of the Anticomplementary Triangle.

Symmedian Point = Reflection of the Circumcenter in the Center of the Brocard Circle.

Symmedian Point = Reflection of the Incenter in the Midpoint of the Incenter and the Symmedian Point.

Symmedian Point = Reflection of the Centroid in the Midpoint of the Centroid and the Symmedian Point.

Symmedian Point = Reflection of the Orthocenter in the Midpoint of the Orthocenter and the Symmedian Point.

Symmedian Point = Reflection of the Gergonne Point in the Midpoint of the Gergonne Point and the Symmedian Point.

Symmedian Point = Reflection of the Nagel Point in the Midpoint of the Nagel Point and the Symmedian Point.

Symmedian Point = Reflection of the Nine-Point Center in the Midpoint of the Nine-Point

Center and the Symmedian Point.

Symmedian Point = Reflection of the Mittenpunkt in the Midpoint of the Mittenpunkt and the Symmedian Point.

Symmedian Point = Reflection of the Spieker Center in the Midpoint of the Spieker Center and the Symmedian Point.

Symmedian Point = Reflection of the Symmedian Point of the Anticomplementary Triangle in the Symmedian Point of the Medial Triangle.

Symmedian Point = Product of the Centroid and the Symmedian Point.

Symmedian Point = Product of the Circumcenter and the Orthocenter.

Symmedian Point = Product of the Gergonne Point and the Internal Center of Similitude of the Incircle and the Circumcircle.

Symmedian Point = Product of the Inner Fermat Point and the Second Isodynamic Point.

Symmedian Point = Product of the First Isodynamic Point and the Outer Fermat Point.

Symmedian Point = Product of the Gibert Point and the Prasolov Point.

Symmedian Point = Product of the Grinberg Point and the Isogonal Conjugate of the Grinberg Point.

Symmedian Point = Product of the Kosnita Point and the Nine-Point Center.

Symmedian Point = Product of the External Center of Similitude of the Incircle and the Circumcircle and the Nagel Point.

Symmedian Point = Product of the Inner Vecten Point and the Outer Kenmotu Point.

Symmedian Point = Product of the Inner Kenmotu Point and the Outer Vecten Point.

Symmedian Point = Product of the First Brocard Point and the Second Brocard Point.

Symmedian Point = Product of the Mittenpunkt and the Isogonal Conjugate of the Mittenpunkt.

Symmedian Point = Product of the Spieker Center and the Isogonal Conjugate of the Spieker Center.

Symmedian Point = Product of the Schiffler Point and the Orthocenter of the Intouch Triangle.

Symmedian Point = Product of the Second Power Point and the Isotomic Conjugate of the Incenter.

Symmedian Point = Product of the Third Power Point and the Isotomic Conjugate of the Symmedian Point.

Symmedian Point = Product of the Congruent Isoscelizers Point and the Perspector of Triangle ABC and the Extouch Triangle of the Intouch Triangle.

Symmedian Point = Product of the Centroid of the Orthic Triangle and the Isotomic Conjugate of the Nine-Point Center.

Symmedian Point = Product of the Symmedian Point of the Anticomplementary Triangle and the Homothetic Center of the Orthic Triangle and the Tangential Triangle.

Symmedian Point = Inverse of the Kiepert Center in the Orthocentroidal Circle.

Symmedian Point = Inverse of the Schoute Center in the Circumcircle.

Symmedian Point = Inverse of the Schoute Center in the Moses Circle.

Symmedian Point = Inverse of the Schoute Center of the Circumcevian Triangle of the Symmedian Point in the Circumcircle.

Symmedian Point = Inverse of the Schoute Center of the Circumcevian Triangle of the Schoute Center in the Circumcircle.

Symmedian Point = Inverse of the Schoute Center of the Circumcevian Triangle of the First Beltrami Point in the Circumcircle.

Symmedian Point = Inverse of the Schoute Center of the Circumcevian Triangle of the Second Beltrami Point in the Circumcircle.

Symmedian Point = Inverse of the Schoute Center of the Second Brocard Triangle in the Circumcircle.

Symmedian Point = Inverse of the Schoute Center of the Inner Lucas Triangle in the Circumcircle.

Symmedian Point = External Center of Similitude of the Circumcircle and the Half-Moses Circle.

Symmedian Point = External Center of Similitude of the Fermat-Tucker Circle and the Moses Circle.

Symmedian Point = Radical Center of the Triad of the Circumcircles of the Triangulation Triangles of the Symmedian Point.

Symmedian Point = Perspector of Triangle ABC and the Medial Triangle of the Orthic Triangle.

Symmedian Point = Perspector of the Incentral Triangle and the Anticevian Triangle of the

Internal Center of Similitude of the Incircle and the Circumcircle.

Symmedian Point = Perspector of the Medial Triangle and the Anticevian Triangle of the Circumcenter.

Symmedian Point = Perspector of the Symmedial Triangle and the Tangential Triangle.

Symmedian Point = Perspector of the Cevian Triangle of the Parry Point and the Anticevian Triangle of the Schoute Center.

Symmedian Point = Perspector of the Symmedial Triangle and the Antipedal Triangle of the Circumcenter.

Symmedian Point = Perspector of the Symmedial Triangle and the Circumcevian Triangle of the Symmedian Point.

Symmedian Point = Perspector of the Symmedial Triangle and the Second Brocard Triangle.

Symmedian Point = Perspector of the Anticevian Triangle of the Circumcenter and the Pedal Triangle of the Circumcenter.

Symmedian Point = Perspector of the Tangential Triangle and the Circumcevian Triangle of the Symmedian Point.

Symmedian Point = Perspector of the Tangential Triangle and the Second Brocard Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Third Power Point and the Neuberg Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Brocard Midpoint and the Reflected Neuberg Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Third Power Point and the Inner Lemoine-Kiepert Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Brocard Midpoint and the Outer Lemoine-Kiepert Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Center of the Brocard Circle and the Outer Gallatly-Kiepert Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Inner Kenmotu Point and the Outer Vecten Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Outer Kenmotu Point and the Inner Vecten Triangle.

Symmedian Point = Homothetic Center of the Pedal Triangle of the Danneels-Apollonius

Prespector and the First Apollonius-Kiepert Triangle.

Symmedian Point = Perspector of the Antipedal Triangle of the Circumcenter and the Circumcevian Triangle of the Symmedian Point.

Symmedian Point = Perspector of the Antipedal Triangle of the Circumcenter and the Second Brocard Triangle.

Symmedian Point = Perspector of the Circumcevian Triangle of the Symmedian Point and the Second Brocard Triangle.

Symmedian Point = Perspector of Triangle ABC and the Stevanovic Triangle of the Symmedian Points of the Triangulation triangles of the First Isodynamic Point.

Symmedian Point = Perspector of Triangle ABC and the Stevanovic Triangle of the Symmedian Points of the Triangulation triangles of the Second Isodynamic Point.

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

Symmedian Point = Perspector of Triangle ABC and the Triangle of the Centroids of the Corner Triangles of the Orthocenter.

Symmedian Point = Perspector of Triangle ABC and the Triangle of the reflections of the Centroid in the sides of the Excentral Triangle.

Symmedian Point = Perspector of Triangle ABC and the Triangle of the reflections of the Symmedian Point in the vertices of the Symmedial Triangle.

Symmedian Point = Perspector of Triangle ABC and the Triangle of the reflections of the Symmedian Point in the vertices of the Tangential Triangle.

Symmedian Point = Perspector of Triangle ABC and the Triangle of the reflections of the vertices of the Symmedial Triangle in the Symmedian Point.

Symmedian Point = Perspector of Triangle ABC and the Triangle of the reflections of the vertices of the Tangential Triangle in the Symmedian Point.

Symmedian Point = Perspector of Triangle ABC and the Outer Apollonius Triangle of the Lucas Circles of the Symmedial Triangle.

Symmedian Point = Perspector of Triangle ABC and the Outer Apollonius Triangle of the Lucas Circles of the Tangential Triangle.

Symmedian Point = Perspector of Triangle ABC and the Outer Apollonius Triangle of the Lucas Circles of the Antipedal Triangle of the Circumcenter.

Symmedian Point = Perspector of Triangle ABC and the Outer Apollonius Triangle of the Lucas Circles of the Circumcevian Triangle of the Symmedian Point.

Symmedian Point = Perspector of Triangle ABC and the Outer Apollonius Triangle of the Lucas Circles of the Second Brocard Triangle.

Symmedian Point = Isogonal Conjugate of the Centroid.

Symmedian Point = Isogonal Conjugate of the Complement of the Centroid.

Symmedian Point = Isogonal Conjugate of the Anticomplement of the Centroid.

Symmedian Point = Isotomic Conjugate of the Anticomplement of the Brocard Midpoint.

Symmedian Point = Isotomic Conjugate of the Isogonal Conjugate of the Third Power Point.

Symmedian Point = Complement of the Isotomic Conjugate of the Orthocenter.

Symmedian Point = Anticomplement of the Symmedian Point of the Medial Triangle.

Symmedian Point = Isogonal Conjugate of the Isotomic Conjugate of the Centroid.

Symmedian Point = Isogonal Conjugate of the Cyclocevian Conjugate of the Orthocenter.

Symmedian Point = Isogonal Conjugate of the Square of the Centroid.

Symmedian Point = Isogonal Conjugate of the Complement of the Centroid of the Medial Triangle.

Symmedian Point = Isogonal Conjugate of the Anticomplement of the Centroid of the Medial Triangle.

Symmedian Point = Isogonal Conjugate of the Centroid of the Medial Triangle.

Symmedian Point = Complement of the Isotomic Conjugate of the de Longchamps Point of the Medial Triangle.

Symmedian Point = Isogonal Conjugate of the Isotomic Conjugate of the Centroid of the Medial Triangle.

Symmedian Point = Square of the Incenter.

Symmedian Point = Square of the Anticomplement of the Spieker Center.

Symmedian Point = Square of the Complement of the Nagel Point.

Symmedian Point = Square of the Isogonal Conjugate of the Incenter.

Symmedian Point = Square of the Nagel Point of the Medial Triangle.

Symmedian Point = Square of the Circumcenter of the Intouch Triangle.

The Symmedian Point lies on the Brocard Circle.

The Symmedian Point lies on the Orthocentroidal Circle of the Pedal Triangle of the Symmedian Point.

The Symmedian Point lies on the Parry Circle of the Pedal Triangle of the Symmedian Point.

The Symmedian Point lies on the Brocard Circle of the Pedal Triangle of the First Brocard Point.

The Symmedian Point lies on the Brocard Circle of the Pedal Triangle of the Second Brocard Point.

The Symmedian Point lies on the Brocard Circle of the Circumcevian Triangle of the Symmedian Point.

The Symmedian Point lies on the Brocard Circle of the Circumcevian Triangle of the Schoute Center.

The Symmedian Point lies on the Brocard Circle of the Circumcevian Triangle of the First Beltrami Point.

The Symmedian Point lies on the Brocard Circle of the Circumcevian Triangle of the Second Beltrami Point.

The Symmedian Point lies on the Circumcircle of the First Brocard Triangle.

The Symmedian Point lies on the Circumcircle of the Second Brocard Triangle.

The Symmedian Point lies on the Brocard Circle of the Fourth Brocard Triangle.

The Symmedian Point lies on the Circumcircle of the Inner Gallatly-Kiepert Triangle.

The Symmedian Point lies on the Brocard Circle of the First Lemoine-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the Second Lemoine-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the First Cosine-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the Second Cosine-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the First Kenmotu-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the Second Kenmotu-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the First Gallatly-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the Second Gallatly-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the First Taylor-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the Second Taylor-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the First Apollonius-Tucker Triangle.

The Symmedian Point lies on the Brocard Circle of the Second Apollonius-Tucker Triangle.

The Symmedian Point lies on the Outer Apollonius Circle of the Mixtilinear Incircles of the Second Brocard Triangle.

The Symmedian Point lies on the Outer Apollonius Circle of the Lucas Circles of the First Brocard Triangle.

The Symmedian Point lies on the Outer Apollonius Circle of the Lucas Circles of the Second Brocard Triangle.

The Symmedian Point lies on the Outer Apollonius Circle of the Lucas Circles of the Inner Gallatly-Kiepert Triangle.

The Symmedian Point lies on the Line through the Incenter and the Mittenpunkt.

The Symmedian Point lies on the Line through the Centroid and the Isogonal Conjugate of the Grinberg Point.

The Symmedian Point lies on the Line through the Centroid and the Malfatti-Moses Point.

The Symmedian Point lies on the Line through the Circumcenter and the First Isodynamic Point.

The Symmedian Point lies on the Line through the Circumcenter and the Second Isodynamic Point.

The Symmedian Point lies on the Line through the Circumcenter and the Third Power Point.

The Symmedian Point lies on the Line through the Circumcenter and the Inner Kenmotu Point.

The Symmedian Point lies on the Line through the Circumcenter and the Outer Kenmotu Point.

The Symmedian Point lies on the Line through the Circumcenter and the Danneels-Apollonius Prespector.

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

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

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

The Symmedian Point lies on the Line through the Inner Fermat Point and the Kiepert Center.

The Symmedian Point lies on the Line through the First Isodynamic Point and the Second Isodynamic Point.

The Symmedian Point lies on the Line through the First Isodynamic Point and the Third Power Point.

The Symmedian Point lies on the Line through the First Isodynamic Point and the Inner Kenmotu Point.

The Symmedian Point lies on the Line through the First Isodynamic Point and the Outer Kenmotu Point.

The Symmedian Point lies on the Line through the Second Isodynamic Point and the Third Power Point.

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

The Symmedian Point lies on the Line through the Gibert Point and the Kosnita Point.

The Symmedian Point lies on the Line through the Grinberg Point and the Incenter.

The Symmedian Point lies on the Line through the Grinberg Point and the Mittenpunkt.

The Symmedian Point lies on the Line through the Brocard Midpoint and the Circumcenter.

The Symmedian Point lies on the Line through the Brocard Midpoint and the First Isodynamic Point.

The Symmedian Point lies on the Line through the Brocard Midpoint and the Second Isodynamic Point.

The Symmedian Point lies on the Line through the Brocard Midpoint and the Third Power Point.

The Symmedian Point lies on the Line through the Brocard Midpoint and the Inner Kenmotu Point.

The Symmedian Point lies on the Line through the Brocard Midpoint and the Outer Kenmotu Point.

The Symmedian Point lies on the Line through the Brocard Midpoint and the Danneels-Apollonius Prespector.

The Symmedian Point lies on the Line through the Internal Center of Similitude of the Incircle and the Circumcircle and the Second Power Point.

The Symmedian Point lies on the Line through the Isogonal Conjugate of the Grinberg Point and the Malfatti-Moses Point.

The Symmedian Point lies on the Line through the Kiepert-Parry Point and the Parry Point.

The Symmedian Point lies on the Line through the Kiepert Center and the Outer Fermat Point.

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

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

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

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

The Symmedian Point lies on the Line through the Inner Kenmotu Point and the Second Isodynamic Point.

The Symmedian Point lies on the Line through the Inner Kenmotu Point and the Third Power Point.

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

The Symmedian Point lies on the Line through the Outer Kenmotu Point and the Second Isodynamic Point.

The Symmedian Point lies on the Line through the Outer Kenmotu Point and the Third Power Point.

The Symmedian Point lies on the Line through the Danneels-Apollonius Prespector and the First Isodynamic Point.

The Symmedian Point lies on the Line through the Danneels-Apollonius Prespector and the Second Isodynamic Point.

The Symmedian Point lies on the Line through the Danneels-Apollonius Prespector and the Third Power Point.

The Symmedian Point lies on the Line through the Danneels-Apollonius Prespector and the Inner Kenmotu Point.

The Symmedian Point lies on the Line through the Danneels-Apollonius Prespector and the Outer Kenmotu Point.

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.

References

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