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SEMI-EXCIRCLE OF QUADRILATERAL

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Abstract

Suppose that *ABCD* is a quadrilateral. Then there will be 4 pieces of semiexcircle on the quadrilateral. In this paper, we will discuss how to determine the length of the radii of the semi-excircle, but previously we will also be discussed how to determine the length of 4 new sides formed from the extension of the sides on $\Box ABCD$ which has no parallel sides.

Keywords and phrases: semi-excircle of quadrilateral, semi-Gergonne, tangential quadrilateral, radii of excircle.

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References

- [1] A Gultierrez, Go Geometri, hal 1 http://www.gogeometry.com/problem/p569_quadrilateral_excircles_tangency_point_c ongruence.htm. acsessed 4 August 2015. 08.35 pm
- [2] A. Hess, On a circle containing the incenters of tangential quadrilaterals, Forum Geom. 14 (2014), 389-396.
- [3] F. Samandace and I. Fatrascu, The Geometry of Homological Triangles, The Educatios Publisher, Inc., Ohio, 2012.
- [4] H. Mowaffaq, A condition for a circumscriptible quadrilateral to be cyclic, Forum Geom. 8 (2008), 103-106.
- [5] H. S. M. Coxeter and S. L. Greitzer, Geometry Revisited, the Mathematical Association of America, Washington, D. C., 1967.
- [6] L. Hoehn, A new formula concerning the diagonals and sides of a quadrilateral, Forum Geom. 11 (2011), 211-212.
- [7] Mashadi, Pusbangdik Universitas, Riau, 2012.
- [8] Mashadi, Sri Gemawati, Hasriati and Putri Januarti, Some result on excircle of quadrilateral, JP J. Math. Sci. 14(1 & 2) (2015), 41-56.

- [9] Mihal Miculita, A new property of circumscribed quadrilateral, Inter. J. Geom. 1(2) (2012), 61-64.
- [10] M. Josefsson, On the inradius of a tangential quadrilateral, Forum Geom. 10 (2010), 27-34.
- [11] M. Josefsson, More characterizations of tangential quadrilateral, Forum Geom. 11 (2011), 65-82.
- [12] M. Josefsson, The area of a bicentric quadrilateral, Forum Geom. 11 (2011), 62-85.
- [13] M. Josefsson, Similar metric characterizations of tangential and extangential quadrilaterals, Forum Geom. 12 (2012), 63-77.
- [14] N. Minculete, Characterizations of a tangential quadrilateral, Forum Geom. 9 (2009), 113-118.
- [15] M. Radic, Z. Kariman and V. Kadum, A condition that a tangential quadrilateral is also a chordal one, Math. Commun. 12 (2007), 33-52.
- [16] Paul Yiu, Introduction to the Geometry of the Triangle, Florida Atlantic University, 2012.