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RELATIONSHIP OF LEMOINE CIRCLE WITH A SYMMEDIAN POINT

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Abstract

Any triangle ABC has three symmedian lines that intersect at one point K that called symmedian point, so triangle ABC can be partitioned into three triangles are triangle ABK, triangle ACK and triangle BCK. From each of the triangle can be constructed the circumcircle, for example with the center points R, Q and P, respectively. If these points linked, so will form a triangle and has a centroid point, say point M. In addition, each of the circumcircle triangle ABK, triangle ACK and triangle BCK will intersect in six points on the sides and the extension side triangle ABC which will be on one circle that known as third Lemoine circle. If L is the center point of the third Lemoine circle, then in this article discuss relationship of third Lemoine circle with a symmedian point and so we proved that K, L and M are collinear.

Keywords and phrases: symmedian line, symmedian point, lemoine circle, centroid, collinear.

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