Properties of Bicentric Quadrilaterals

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In this project, the properties of the bicentric quadrilaterals were examined. Bicentric quadrilaterals are quadrilaterals, which have both a circumcircle and incircle. For this reason, they have all the properties of a cyclic quadrilateral and a tangential quadrilateral. The different properties of bicentric quadrilaterals were investigated by known matematicians such as Nicolaus Fuss, Henrich Dörrie, Martin Josefsson, J.C. Salazar, Paul Yiu. In this project, the area formulas of the bicentric quadrilaters and of the bicentric deltoids have been proven by new ways.