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Short Proof of a Theorem of Rigby

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1. Results

Honsberger [1] attributes to Rigby the theorem that the cevian circle passes through three other points on a triangle which form another cevian circle. There is a generalization of this. Specifically, if two points are chosen on each side of a circle to form an ellipse through all six points, and if three of those points form a cevian triangle, then the remaining three points must form a cevian triangle. But this is a simple application of both Carnot's and Ceva's theorems. If three of the six terms being multiplied in Carnot's theorem equal 1, then the other three terms must multiply to 1. Each of these are then Cevian triangles.

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