

**ZMATH 2013f.00509**

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**Generalizing complementary regions.**

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From the introduction: In the previous article [the author, *ibid.* 42, No. 1, 10–11 (2013; ME 2013f.00508)] we found that if a point is placed arbitrarily inside a rectangle, and that point joined to all four vertices to create four regions, then opposite, complementary regions have the same total area. Does this property hold for any other shapes? How about the parallelogram, the trapezium, the kite or indeed the general quadrilateral?

*Classification:* G43 E53

*Keywords:* elementary geometry; plane geometry; quadrilaterals; area; triangles; parallelograms; trapeziums; trapezoids; kites; diagonals; geometry software; Anne's theorem; vector products; conjectures; proofs