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Yi Won Stefan Kim*, The Taft School, 110 Woodbury Rd, Watertown, CT 06795, and
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polygon determined by the short diagonals of a convex polygon.*

Let K be a convex pentagon in the plane and let K_1 be the pentagon bounded by the diagonals of K . It has been conjectured that the maximum of the ratio between the areas of K_1 and K is reached when K is an affine regular pentagon. In this paper we prove this conjecture. We also show that for polygons with at least six vertices the trivial answers are the best possible. (Received June 08, 2019)