© 2019 FIZ Karlsruhe

**ZMATH 2016a.00590**

**Berglund, Jorgen; Taylor, Ron**

**Bisections and reflections.**

Math. Mag. 87, No. 4, 284-290 (2014).

Summary: We consider the process of reflecting a point on the side of a polygon across successive angle bisectors. As we iterate this process, we find an interesting and sometimes periodic pattern. In particular, we show that for any polygon with an odd number of sides, a point on any side is returned to its original position by a finite number of reflections that is either one or two times the number of sides. Additionally, for a polygon with an even number of sides, a point is guaranteed to return to its original position as soon as possible or not at all.

*Classification:* G40
*Keywords:* bisections; reflections; polygons; cyclic quadrilaterals
doi:10.4169/math.mag.87.4.284