1056-BF-1242   **Roger C. Alperin*** (`alperin@math.sjsu.edu`), Dept. of Math., San Jose State University, San Jose, CA 95192. *Bisections, Trisections and Quintisections by Origami.* Preliminary report.

I will discuss construction axioms for origami folds and their relation to ordinary ruler and compass constructions in the plane. The origami axioms also allow a simple fold which gives an angle trisection or more generally can solve a cubic equation. This fold is related to an algebraic curve of degree three. More complex or multi-folds have also been investigated. These multi-folds give methods for an angle quintisection. The quintisection can also be achieved as the intersection of two cubic curves. (Received September 21, 2009)