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Robert Douglas McGuigan* (rmcmoose@sbcglobal.net), 6150 Ellerbrook Way, San Jose, CA 95123. *Lower Bounds for the Ropelength of Reduced Conformations.*

This paper generalizes the results of Sadjadi (2007) and Alley (2009) by providing an algorithm to find a lower bound for the ropelength of any conformation which admits a reduced diagram. This lower bound is found by changing this problem of geometry into one of linear programming, which is then solved by the simplex algorithm. (Received August 31, 2010)