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Laura K Zirbel*, lzirbel@math.ucsb.edu. *Averages of Subsegment End to End Distance and Radius of Gyration in Ideal Rings.*

Classical results describe the scaling of end-to-end distance and radius of gyration for open and closed ideal chains. We extend these by giving formulae for the exact averages and include internal (or subsegment) scaling. They are used to study the effect of knotting on these characteristics of shape. (Received December 07, 2011)