# University of Colorado <br> <br> Department of Mathematics <br> <br> Department of Mathematics <br> <br> Problem of the Month <br> <br> Problem of the Month <br> <br> February 2009 

 <br> <br> February 2009}

Let $A_{1}, A_{2}, \ldots, A_{n}$ be the vertices of a regular $n$-gon inscribed in a circle of radius 1 . Compute the product of the lengths of all the chords $\overline{A_{i} A_{j}}$. (Your answer should depend on $n$.)

