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## Inequalities on Well-Distributed Point Sets on Circles

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**Abstract:** The setting is a finite set  $P$  of points on the circumference of a circle, where all points are assigned non-negative real weights  $w(p)$ . Let  $P_i$  be all subsets of  $P$  with  $i$  points and no two distinct points within a fixed distance  $d$ . We prove that  $W_k^2 \geq W_{k+1}W_{k-1}$  where  $W_k = \sum_{A \in P_i} \prod_{p \in A} w(p)$ . This is done by first extending a theorem by Chudnovsky and Seymour on roots of stable set polynomials of claw-free graphs.



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