Mohammed A. Qazi* (qazima@aol.com), Dept. of Mathematics, Tuskegee, AL 36088, and Q. I. Rahman. An Extension of Bernstein’s Inequality to Rational Functions.

Let $\mathcal{P}_n$ be the class of all polynomials of degree at most $n$. It is known that if $f \in \mathcal{P}_n$ and $|f(z)| \leq 1$ on the unit circle, then $|f'(z)| \leq |z|^{n-1}$ outside the unit disk. We present an extension of this result to rational functions which have all their poles in the open unit disk. (Received September 23, 2012)