1067-30-1422 **Michael J Miller*** (millermj@mail.lemoyne.edu), Dept of Mathematics, Le Moyne College, Syracuse, NY 13214. *On a refinement of Sendov's conjecture (part 2).* Preliminary report.

Let β be a complex number of modulus at most 1. For those polynomials P with a root at β and all roots in the unit disk, define $r(\beta)$ to be the greatest possible distance between β and the closest root of the derivative P'. In this notation, Sendov's conjecture claims that $r(\beta) \leq 1$.

We seek the greatest lower bound c of $\{(1 - r(\beta))/(\beta(1-\beta)) : 0 < \beta < 1\}$. If Sendov's conjecture were true, then $c \geq 0$. It is known that $c \leq 3/10$, and we have previously conjectured (see #1003-30-616) that $c = 3/10$; we show here that $c < 3/10$. (Received September 21, 2010)