Name: ——————

QUIZ 2

Throughout Δ will denote the open unit disc centred at 0, i.e., $\Delta = B(0,1)$.

(1) Suppose $f(z)$ is an analytic function on Δ with $f(0) = 0$, and $f'(0) \neq 0$. Prove that there exists a positive real number r such that the inverse of f exists on $B(0,r)$.
(2) In the above situation, show that the inverse is analytic on $B(0,r)$.