

Math 165: Honors Calculus I
Quiz 8 *Nov. 5, 1998*

Name: _____

1. a) State BOLZANO'S THEOREM.

b) State the INTERMEDIATE VALUE THEOREM.

2. Prove that the equation $\cos(x) = x$ has a solution.

3. Let $f(x) = \frac{x}{x+1}$ for $x > -1$.

a) Show that $f(x)$ is one-to-one in its domain $x > -1$.

b) Find a formula for $f^{-1}(x)$ and determine its domain.