

Name: _____
MAT 295

Quiz 3
Fall 2016

Problem 1: Use the Squeeze Theorem to show that $\lim_{x \rightarrow 0} x^3 2^{\cos(1/x)} = 0$.

Problem 2: Use the Intermediate Value Theorem to show that $f(x) = \pi x^2 e^{-x} - 1$ has a root on the interval $[0, 1]$.

Problem 3: Use the definition of the derivative to find the derivative of $f(x) = 2x^2 + 3x - 5$.