

Math 171 - Quiz 9

November 7, 2013

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Use the linearization of $f(x) = x^3 + \sqrt{x}$ at $x = 1$ to approximate $(0.98)^3 + \sqrt{0.98}$.
2. (3 points) Use Newton's method to approximate the smallest positive solution of $5x \sin x = 3$.
3. (3 points) Use Newton's method, starting with $x_0 = 2$, to approximate a solution of $x^3 - 16x + 32 = 0$.