

Math 371

Quiz 3, February 25, 2015

Name: \_\_\_\_\_

1. In finding a root with Newton's method, an initial guess of  $x_0 = 4$  with  $f(x_0) = 1$  leads to  $x_1 = 3$ . What is the derivative of  $f$  at  $x_0$ ?
2. Can the bisection method be used to find the roots of the function  $f(x) = \sin(x) + 1$ ? Why or why not? Can Newton's method be used to find the roots? If so, what will be the order of convergence and why?