

**Homework 4: Root Finding Methods**

Due: March 21, 2014

1. Find conditions on the constant  $\alpha$  to ensure that the iteration

$$x_{n+1} = x_n - \alpha f(x_n)$$

will converge linearly to a zero of  $f$  if started near the zero.

2. GC 4.7.1
3. GC 4.7.2
4. GC 4.7.10