

Math 124 Worksheet #13

November 20, 2007

1. Show that $f(x) = 2\cos x + 3x - 4$ has at exactly one real root. (Note: Proof by graphing in your calculator does not suffice.)
2. Find a function $g(x)$ for which the derivative is $3x^2 + 12x + 9$.
3. On what intervals is the function $g(x)$ from problem 2 increasing?