

MATH 413
Fall 2007
Lab3

Exercise Set 2.3 and 2.4

Exercise 1

(5 pt)

Given the function $f(x) = x^3 - 2x^2 - 5$.

Plot the function using maple.

Find the root of this function in the interval $[1, 4]$ within 10^{-4} using 413 Tutorial with the following methods

1. Bisection method
2. Secant method
3. Method of False Position
4. Newtons' method
 - with starting value $x = 1$
 - with starting value $x = 2$

Exercise 2

(5 pt)

Given the function $f(x) = 2x \cos(2x) - (x - 2)^2$.

Plot the function using maple.

Find the root of this function in the interval $[2, 3]$ using the same methods than in Exercise 1 (Newton's method with starting value 2).