4/17/18 – Tuesday

Numerical Methods - Spring '18

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Lab #4

Problem 1:

Modify the bisection class code for finding the route of an equation to implement false position instead.

My Solution:

See **falseposition.m**

See **bisectionmod.m for implementation of bisection**

Problem 2:

For fluid flow in pipes the friction is described by a constant called the Fanning Friction Factor, f. This depends on several variables such as the size of the pipe and viscosity of the fluid. These parameters can be lumped together in one single constant called the Reynolds number, R. A formula for predicting f given R is given by the von Karman equation.

$$\frac{1}{\sqrt{f}} = 4\log_{10}\left(R\sqrt{f}\right) - 0.4$$

Write a MATLAB function that computes the fanning friction number using either bisection or false position passed a parameter R. Err=0.000005. a=0.001. b=0.01.

My Solution:

See **fanningfrictionfactor.m**