NUMERICAL ANALYSIS
PROGRAM SET B

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ABSTRACT. Create the following console programs using Visual C++. Send the software in `.CPP` files, and the output in `.TXT` files, to `plbailey@saumag.edu`, as an email attachment.

To capture output from a console application while in the VS 6.0 ADE, go to Project/Setting/Debug/Working Directory, and enter "> `filename.TXT`". Due March 9, 2004, 11:59 pm.

The following programs use the type `FNP` defined by this code:

```
typedef float (*FNP)(float);
```

Program 1. Create a function to find a root of a function via the bisection method.
Syntax: `float bisect(FNP f,float x1,float x2)`
where `bisect` is the name of the function, `f` is a pointer to a function, `x1` and `x2` are the endpoints of an interval, and the return value is the root.

Program 2. Create a function to find a root of a function via the secant method.
Syntax: `float secant(FNP f,float x1,float x2)`
where `secant` is the name of the function, `f` is a pointer to a function, `x1` and `x2` are the endpoints of an interval, and the return value is the root.

By the secant method, I mean the method referred to in class as `chordal`; the method known as the secant method in the book is slightly different.

Program 3. Create a function to find a root of a function via Newton's method.
Syntax: `float newton(FNP f,FNP df,float x0)`
where `newton` is the name of the function, `f` is a pointer to a function, `df` is a pointer to the derivative of `f`, and `x0` is a seed point.

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Date: March 1, 2004.