Midterm A1 / A2 / B1 / B2
Section 4 / 2 / 4 / 2

November 8, 2014

Problem 2 / 3 [10pt]: Finish the following function. For input: f is **a** function so that $f(x_j)$ returns the value of **an** interpolating polynomial at x_j and x is a row vector of values. For output: y is a row vector of the values $f(x_j)$ for each element in x. Assume that $f(x_j)$ only accepts *one value at a time*.

function y = evaluateF(f, x)

end

Okay. This is a *very* tricky problem. When I sat down to take this exam, I almost missed this one completely. In the previous problem, you either wrote the function $f(x)$ as a linear system (A1 / A2) or you found a Lagrangian polynomial named $f(x)$ (B1 / B2). In any case, you've done a lot of work to accurately describe $f(x)$. If this problem were stated like this

Problem 2 / 3 [10pt]: Finish the following MATLAB function named "evaluateF." For input: g is a function so that $g(t_j)$ returns the value of **an** interpolating polynomial at t_j and t is a row vector of values. For output: y is a row vector of the values $g(t_j)$ for each element in t. Assume that $g(x_j)$ only accepts one value at a time.

```
function y = evaluateF( g, t )


end
```

then what we were asking may have been a bit more clear. The first part of solving this problem is recognizing that