Problem4

November 5, 2016

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In [2]: using ApproxFun
        using Plots

In [3]: f = Fun(x->sign(x))
        plot(f)
        savefig("problem4part2.png")

WARNING: Maximum number of coefficients 1048577 reached

[Plots.jl] Initializing backend: pyplot

In [4]: f = Fun(x->asinh(csc(pi*x/(e^x))^2)+2x)
        g = cumsum(f)
        plot(f, label="function")
        plot!(g, label="integral")
        savefig("problem4part3.png")

WARNING: Maximum number of coefficients 1048577 reached

In [5]: A = [1 2 0; 0 2 1; 1 0 2.0]
        B = [1 1 0; 1 -1 1; -1 1 1.0]
        f = Fun(t -> maximum(abs(eigvals(t*A + (1-t)*B))),[0,1])
        plot(f)
        savefig("problem4part4.png")

WARNING: Maximum number of coefficients 1048577 reached

In [ ]:
```