
```
% Matt McDade
% ANM 2
% HW 6

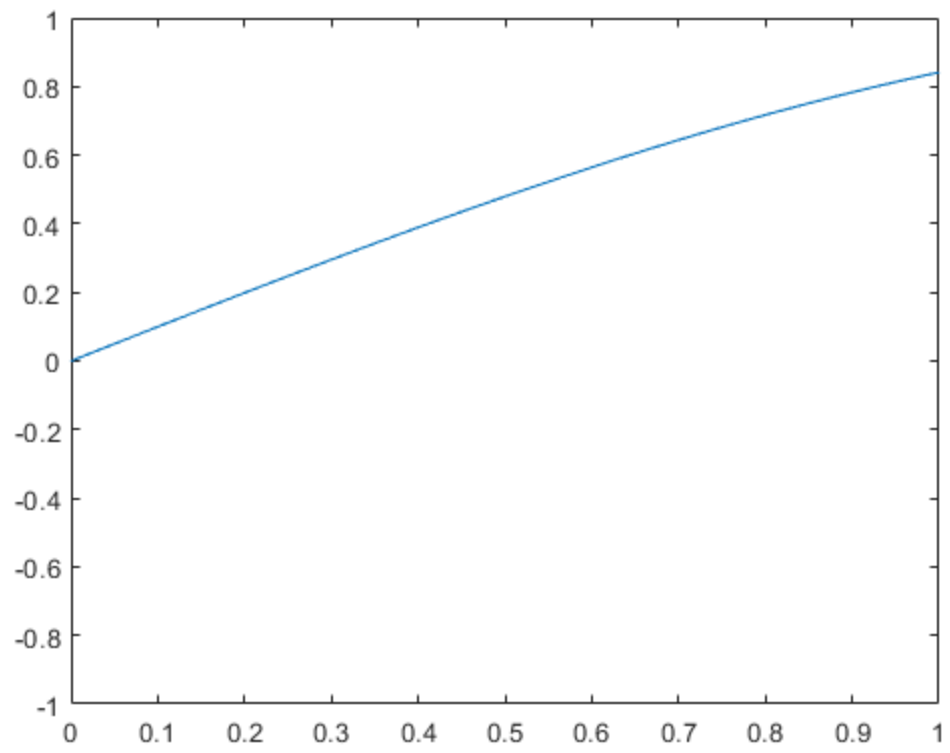
% Not sure what I'm doing here, I'm definitely missing a lot

alpha = 3;
r = 1;
dx = 1e-2;
dt = 1e-5;
x = 0:dx:10;
N = length(x);
u = zeros(N,2);

u(:,1) = sin(x);

plot(x,u(:,1)),axis([0 1 -1 1])

for j=2:800
    u(1,2) = 0;
    u(N,2) = 0;
    for i=2:N-1
        u(i,2) = u(i,1) + (r/alpha)*(u(i-1,1)-2*u(i,1)+u(i+1,1));
    end
    if (mod(j+1, 10000)==0)
        plot(x,u(:,2))
    end
    u(:,1) = u(:,2);
end
```



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