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Computing Assignment 4

Part 1.

trinumrec.m **downloaded**

Part 2.

>> AM = [2 2 2 2];

>> AL = [0 -1 -1 -1];

>> AR = [-1 -1 -1 0];

>> trinumrec(AL, AM, AR, r)

ans =

1.0000 1.0000 1.0000 1.0000

**Confirmed**

Part 3.

Builds AL, AM, AR:

h = .001;

x = 0:h:2;

N = length(x);

AL(1) = 0;

AM(1) = 1;

AR(1) = 0;

for i=2:N-1

AL(i) = ((h^-2) - (3/(2\*h)));

AM(i) = ((x(i)^2) - (2/(h^2)));

AR(i) = ((h^-2) + (3/(2\*h)));

end

AL(N) = 0;

AM(N) = 1;

AR(N) = 0;

r(1) = 10;

r(N) = -3;

for i=2:N-1

r(i) = exp(-x(i));

end

>> y = trinumrec(AL, AM, AR, r);

>> plot(y)

