function f = fSSR(a,xm,ym)

sums = 0;

R = 8.31434;

T = input('Enter Temperature (K):');

VIL = input('Enter Lubricant Volume (cm3):');

rhoIL = input('Enter Lubricant Density (g/cm3):');

MWIL = input('Enter Lubricant Molecular Weight (g/mol):');

Vg = 30-VIL;

L = input('Enter Lubricant Depth (cm):');

k = (8\*R\*T\*VIL\*rhoIL)/(pi^2\*Vg\*MWIL);

for n=0:55

sums = sums + (1/(2\*n+1)^2\*exp((2\*n+1)^2\*pi^2\*a(2)\*xm)/(4\*L^2)-1);

end

yp = (k/a(1))\*sums;

f = sum((ym-yp).^2);

Code asks for input parameters over and over in the command window, therefore I made fSSR2 with constants to simplify it and see if fminsearch would work.