**Homework 1**

Try to guess big-O of our simplex algorithm!!!

Download our complete simplex algorithm from our web site. Run the simplex method 5 timed for n variables and n/2 random inequalities (there is some code that will do this). Pick n = 100 and find the average time it takes. Then do this for n = 300, n = 500, n= 700, n= 900, n=1100, etc. Create a chart with these runtimes and try to see what function might fit the data best.

**Homework 2**

Consider the DE: y’ = k y (L – y). To solve it, we separate the variables:

dy/dt = k y (L-y) 🡺 🡺

Find (a) the function y(t) and (b) its limit y(t) as t 🡪 infinity. HINT: Use the fact that (or whatever other trick you happen to know).