clc; clear all; close all;

mean = 1152;

stdev = 440;

s = 0.005344;

c = 0.022243;

optimal = 841;

scale = 1500;

q = 1:10:scale;

nums = size(q, 2);

tc = zeros(1, nums);

syms r;

% simulate different cases of order quantity

for i=1:nums

tc(i) = int(c\*(q(i)-r)\*1/(stdev\*sqrt(2\*pi))\*exp(-(r-mean)\*(r-mean)/(2\*stdev\*stdev)), r, 0, q(i))+...

int(s\*(r-q(i))\*1/(stdev\*sqrt(2\*pi))\*exp(-(r-mean)\*(r-mean)/(2\*stdev\*stdev)), r, q(i), inf);

i

end

plot(q, tc, '-')