Homework assigned Wednesday, September 22

The ***discrete logistic equation*** is

$$N_{t+1} = N_t + rN_t\left(1 - \frac{N_t}{K}\right)$$

where r is the per capita per year growth rate, and K is the carrying capacity. Thus if we know the population, N_t, in year t, this lets us compute the population, N_{t+1}, in the year $t + 1$.

Here are some examples for you to compare with your work.

(1) If $r = .3$, $K = 200$, and $N_0 = 190$, then $N_1 = 192.85$, $N_2 = 194.918$, $N_3 = 196.404$

(2) If $r = 2.5$, $K = 100$, and $N_0 = 120$, then $N_1 = 60$, $N_2 = 120$, $N_3 = 60$

(3) If $r = 1.5$, $K = 500$, and $N_0 = 400$, then $N_1 = 520$, $N_2 = 488.8$, $N_3 = 505.224$