Name_____Free Response Practice Date_____

Free Response part 3 DUE Tomorrow Suggested Time Limit 15 Minutes

3. Sea grass grows on a lake. The rate of growth of the grass is $\frac{dG}{dt} = kG$ where k is a constant.

   (a) Find an expression for G, the amount of grass in the lake (in tons), in terms of t, the number of years, if the amount of grass is 100 tons initially, and 120 tons after one year.

   (b) In how many years will the amount of grass available be 300 tons?

   (c) If fish are now introduced into the lake and consume a consistent 80 tons/year of sea grass, how long will it take for the lake to be completely free of sea grass?

Show work for part a)

Show work for part b)

Show work for part c)