

Email your Excel files to amohr@nebrwesleyan.edu by 11:59 pm on the due date. If you have additional written work to show, bring that with you to the next class period.

Maximum Sustainable Harvest

Submit solutions to Exercises 1 - 6 on page 302 in the text. There is a typo in the definition of reproduction curve on page 301. The second sentence of the first paragraph should read “This is a function $y = f(P)$ such that if P is the population after t years, then $f(P)$ is the population a year later, at time $t + 1$.”

You will need to submit a digital portion and a handwritten portion.

The digital portion should contain the graphs requested in part (a) of questions 1 - 5 and part (b) of question 6. You can see an example of 1a using WolframAlpha here:

<http://www.wolframalpha.com/input/?i=plot+P%2C+plot+P%2810+-+P%29%2C+plot+P%2810+-+P%29+-+P>

If you use WolframAlpha, right click the graph and choose “Save As” (or equivalent) to save the graph to your computer, then insert it into a word processor such as Word or Pages. This document should also contain the population and maximum sustainable harvest for each question. You can see an example of 1a using Word here:

<http://www.austinmohr.com/14spring060/project3part1a.docx>

Notice the population is measured in thousands, so $H(4.5) = 20.25$ means the ideal population is 4,500 and the maximum sustainable harvest is 20,250.

You will need to use spreadsheet software such as Excel for question 6a. Please submit this file, as well.

The handwritten part should contain your calculations for parts (b) and (c) of questions 1 - 3.