

Because mathematical models are one of the most important tools where mathematics is used to help answer important questions in the life sciences, this project will involve analyzing and interpreting several models in depth.

Choose two of the following exercises from section 33:

- 21, 23, 27, 29, 32

and one of the following exercises from section 35:

- 6, 8, 9

You are encouraged to choose problems that are related to your field of interest. If you have trouble choosing problems that interest you, I have several additional problems that you could choose instead of the ones listed above.

Your assignment for this project is to:

- solve the problems you choose,
- write up the solutions in depth (including stating the problem and identifying each part that you are solving),
- and comment on the biological meaning of the results.

You are encouraged, but not required, to use Maple to help you solve the problems. Also, you are encouraged to use Maple or a word processor to type up your results. If you choose to hand-write your work, solutions, and/or comments, they must be in pen and must be extremely neat and legible. If I am unable to read or follow your work, I will return it to you ungraded. If there is still time available, you may rewrite and resubmit your work.

NOTE: Some of the problems have partial solutions in the back of the book, but you are still required to show all work for all of the problems you choose. You will not receive any credit for a problem if you simply copy the problem statement and the solution.

You should do this assignment as if you were working in a lab and you were presenting the results to the lab manager. Write up your results neatly and professionally. Part of your grade on this project will reflect how well you accomplished that.

Grading: 15 points per problem, 5 points for presentation quality (50 points total)

**Due Date: Friday, December 8, 2006**