

For this assignment, you will be expected to hand in a Mathematica Notebook as a printout or in electronic form. The first part of each problem asks for written information which you can either type into the Notebook or write on a separate piece of paper.

Instructions for 24:

You are given two graphs, I and II, and asked to (a) find a parametrization that produces the surfaces pictured in the book, and (b) verify your answer using a graphing utility.

- For each of I and II, figure out the parametrization ahead of time.
- Then use Mathematica to check them.
- Make sure your viewpoint is the **same** as the one in the book.

Instructions for 26 and 28:

You are given two graphs, (a) and (b), with their parametrizations, and asked to find restrictions on the parameters that would produce the given graphs and then check your answer using a graphing utility.

- For each of (a) and (b), figure out the restrictions ahead of time.
- Then use Mathematica to check them.
- Make sure your viewpoint is the **same** as the one in the book.

Remarks:

- For sample graphs and a list of Mathematica commands and options, see the Mathematica Notebook shown in class which is available on the course Web page. Go to www.math.union.edu/~niefiels/, click on Math 117, and then on Mathematica Surfaces Notebook.
- You can copy and paste (within your file or from the sample notebook to your file) just as you would in any word processor.
- If you have a cell you would like to delete, select the bracket to the right of the cell (the one closest to the section to be removed) and use the Cut command in the Edit menu.
- If you are unfamiliar with Mathematica, try reviewing the Introduction to Mathematica Notebook also available on the course Web page.