Math 255
Homework Set 4
Winter 2011
Due at the beginning of class, Fri., Feb. 11

The assignment consists of the following problems from the text:

- Section 14.1, Pages 891–892: #2, #6, #12, and #40.
- Section 14.2, Pages 897–898: #10, #12, #28 (no graphing required), #42, #44, and #47.
- Section 14.3, Pages 904–906, #2, #4, #20, #40, and #50.
- Section 14.4, Pages 914–916: #6, #16, #22, #34, and #40.

Note: For 6th edition users, the following problems are different in the 6th edition:

- Section 14.1: #12 and #40. #40 in the UM edition is the same as problem #42 in the 6th edition.
- Section 14.2 #10 and #28.
- Section 14.3: #2, #4,#20,#40,#50. #20 in the UM edition is the same as problem #24 in the 6th edition. #50 in the UM edition is the same as problem #54 in the 6th edition.
- Section 14.4: #6, #16,#34,#40. #34 in the UM edition is the same as problem #36 in the 6th edition. #40 in the UM edition is the same as problem #42 in the 6th edition.

If you do not have the UM edition, you will have to copy these problems either from a friend or from the reserve copy of the UM edition in the library.

The following problems related to Computer Lab II are also part of the assignment (use Maple, and hand in your printouts):

- Section 13.6, Pages 873–874: #38 and #40. (**NOT IN 6th edition**)
- Section 13.7, Pages 878–879: #66 (**NOT IN 6th edition**) (try typing into Maple the command

  ```
  > implicitplot(x^2+y^2<1,x=-1.2..1.2,y=-1.2..1.2,filledregions);
  ```

  to get an idea of what to do for this problem. Of course the problem is asking for a solid in three-dimensional space instead of a two-dimensional region).
- Section 14.1, Pages 891–892: #42 (#44 in 6th ed.) (skip the sketching by hand part, and just use the Maple command `spacecurve` and/or `tubeplot` to plot the knot from the viewpoint of various directions in space).