Math 308 - Differential Equations **Fall 2002**

Homework Assignment 6

Due *Monday, October 28.*

Text Problems

- Section 2.4/ 7, 8, 9, 14
- Section 3.1/ 14, 18, 26, 28, 32, 34

Exercises - Do Not Hand In

- Section 3.1/ 5, 7, 11, 13, 19, 27, 29, 31

Notes. In several of the problems, you are given functions $x(t)$ and $y(t)$ and asked to plot the corresponding curve in the xy plane. You can use Maple to do this. For example, suppose $x(t) = e^{-t/10}\cos(t)$ and $y(t) = e^{-t/10}\sin(t)$. You can use the `plot` command in Maple to plot the xy curve for $0 \le t \le 15$ as follows:

```
> plot([exp(-t/10)*cos(t),exp(-t/10)*sin(t),t=0..15]);
```

The square brackets containing three arguments tell the plot command that this is a *parametric curve* of the form $[x(t), y(t), t = t_0..t_1]$. The result of the plot command is