- tutorial, check one:T9:30;T10:30;T11:30;R10:30;R11:30;R12:30.
- begin each problem on a new page \& clearly identify each question.
- use words to describe your procedures \& to interpret your results.
- put boxes around your final results.
- due on friday 11 september at start of lecture.

| question \# | CONCEPT keywords \& MAIN formula/result |
| :---: | :---: |
| \# 3.4.41 | concept |
|  | result |
| \# 3.5.18 |  |
| \# 3.6.15 |  |
| \# 3.7.16 |  |
| \# 3.7.17 |  |
|  |  |

- problems for submission are indicated in bold.
- homework portfolios will also be graded on completeness \& presentation.
- certain problems will be designated as practice problems; and although not subject to submission, will be assumed to have been covered for purposes of examinations.
- note: ranges of problems are generally of the same type. You needn't consider all of them once you understand how they work.


## Section 3.4

- practice: \# 27 (what is the wronskian of the corresponding complex exponential solutions?), 28, 39-42
$\# 41$ to solve this problem, you need to change the independent variable from $t$ to $x=\ln t$. The first step is to rewrite the ODE for $y(t)$ into the ODE for $y(x)$ - this involves use of the chain \& product rules. If you need a hint, see problem $\# 34 \mathrm{a}$. (Understanding how to change variables is very important.)


## Section 3.5

- practice: \# 8-10, 12-14, 25-28
\#18


## Section 3.6

- practice: \# 5-8, 12-14
\#15 read example $\# 5$ of the section carefully.


## Section 3.7

- practice: \# 7, 8, 13-15
\#16 follow the approach of example \#1 for your presentation.
\#17 just use the formulas of theorem 3.7.1.


## Maple Exercise

- use a modification of one of the Maple sheets to address the question posed in problem 3.5.31. Write two sentences summarizing how successful you were making Maple illustrate the result.

