AMSC/CMSC 460   Quiz 8   ,   Fall 2002

Show all work. You may leave arithmetic expressions in any form that a calculator could evaluate. By putting your name on this paper, you agree to abide by the university's code of academic integrity in completing the quiz. Use no books, calculators, cellphones, communication with others, scratchpaper, etc.

Name _____

Student number _____

1. (10) Let

$$
\begin{aligned}
y' &= y^2 - 5t \\
y(0) &= 1
\end{aligned}
$$

Determine whether this problem is stable or unstable at $t = 0$.

2. (10) Apply Euler's method with a stepsize of $h = .1$ to the problem

$$
\begin{aligned}
y' &= y^2 - 5t \\
y(0) &= 1
\end{aligned}
$$

to compute approximations for $y(.1)$, $y(.2)$, and $y(.3)$.