

HW #2 (Due by 11:30 AM, Tuesday, September 23, 2008)

1. Exercise 2.6, text.
2. Exercise 4.16, text.

**Problem #3. Which of the following ODE's are asymptotically stable?
Why?**

1. $\ddot{y} + 2\dot{y} + 1 = 0$

2. $\ddot{y} - 2\dot{y} + 1 = 0$

3. $\ddot{y} + 2\ddot{y} + 5\dot{y} - 5y = 0$

4. $\ddot{y} + 2\ddot{y} + 5\dot{y} + 5y = 0$

5. $\ddot{y} + 3\ddot{y} + 5\dot{y} + 11y = 0$

6. $\ddot{y} + 2\ddot{y} + 5\dot{y} + 11y = 0$