

2150 Test 2 Study Guide

The test covers HW 6, HW 7, HW 8, HW 9, HW 10, HW 13.

There is a handout that I will give you on the test with formulas.

The handout is on the website so you can see what's on it beforehand.

HW 6 –

- Determining if two functions are linearly independent or dependent.
See problem 1.
- Finding a general solution to an ODE or initial value problem.
See problem 2. For more practice see problems 3, 4.

HW 7 –

- Finding a general solution to a homogeneous constant coefficient second order ODE or initial-value problem.
See problems 1,2.

HW 8 –

- (i) Finding a homogeneous solution y_h , then (ii) finding a particular solution y_p , and (iii) combine them to make the general solution. Use to solve initial-value problems.
See problems 1,2,3.

HW 9 –

- Using the variation of parameters formula to find a particular solution to the ODE. Then use it to find the general solution.
See problem 1.

HW 10 –

- Using reduction of order to find a second linearly independent solution to a linear homogeneous 2nd order equation given that you have one solution to the equation already.
See problem 1.
- Using variation of parameters to solve a linear 2nd order ODE that isn't constant coefficient.
See problems 2, 3.

HW 13 –

- Approximating a solution to a first order equation using Euler's method.
See problems 1(a), 2, 3.