

2150 Test 1 Study Guide

The test covers HW 1, HW 2, HW 3, HW 4, HW 5.

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 1 –

- Finding the order of an ODE. Is it linear or not?
See problem 1.
- Showing that you have a solution to an ODE or an initial-value problem.
See problems 2(a,b,c,d), 3, 4.
- Solve for constants in your solution so it satisfies an initial-value problem.
See problem 2(e).

HW 2 -

- Show that there is a unique solution to the first order initial value problem using Picard's theorem.
See problem 1.
- Showing an initial value problem can have more than one solution.
See problem 2.

HW 3 –

- Solving a first order linear ODE.
See problem 1, 2.
(in problem 2 you have to divide out the y' coefficient first)
- Solving a first order linear initial-value problem.
See problem 3,4,5.

HW 4 –

- Solving a separable ODE or initial-value problem.
See problem 1.

HW 5 –

- Solving an exact ODE or initial-value problem.
See problems 1,2.