

INTRO DIFFERENTIAL EQUATIONS

Midterm Exam 2

Monday, November 3, 2008 — 9:00 am - 9:50 am

Problem	1	2	3	4	evaluation form	Σ
Points						

Student's name:

Problem 1.

Find a general solution of the equation

$$y \sin t + y' \cos t = 1$$

Problem 2.

Find the solution of the initial value problem

$$y - y' = y^2 + ty', \quad y(1) = 0.$$

Problem 3.

Find a general solution of the equation

$$y'' + 3y' + 2y = \frac{1}{e^t + 1}$$

Problem 4.

What second order linear homogeneous differential equation with constant coefficients has a solution $y(t) = 2e^t \sin t$?