

HOMEWORK 3
DIFFERENTIAL EQUATIONS
DUE 2013-08-29

Show your work!

(1) Consider the initial-value problem

$$\frac{dy}{dt} = -\frac{\sin(t)}{e^y + \cos(y)}, \quad y(\pi/2) = \pi/6.$$

(a) Find the solution of the problem in implicit form.

(b) What is ~~$y(\pi/3)$~~ $y(-\pi/2)$?

- **Five** book problems: #1.2.11, 13, 18(a–d) (3 problems); #2.2.13(a, b), 14(a, b) (2 problems). **HINT** for #1.2.11(e): how is the distance fallen related to the velocity?