Quiz 2
Submission Deadline: Monday, January 30 by 3:30 p.m.

This quiz gives 50 *points. Each problem gives 25 points. For submission instructions, see either the module for chapter 2/Quiz 2 or the syllabus. Late submissions will receive the grade of zero. Show all your work.* **No work, no credit**.

1. Solve the initial value problem

$$\left(3e^{3x}\ln(1+y^2) - \frac{x}{\sqrt{x^2+1}}\right)dx = \left(2\sin y\cos y - 2e^{3x}\frac{y}{1+y^2}\right)dy.$$

   where $y(0) = 0$.

2. Find the general solution to

$$(y-x)dx - (y+x)dy = 0.$$