

## Assignment Set 2, G63.2470, Spring 2009

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February 11, 2009

**The following assignments are due on February 18 at midnight.**

Solve the following equations:

1.  $tx^2(tx' + x) = 1$

2.  $tx' + t^2 + tx - x = 0$

3.  $(t + 2x^3)x' = x$

4.  $(x')^3 - x'e^{2t} = 0$

5.  $t + xx' = x^2(1 + (x')^2)$

6.  $tx' = e^x + 2x'$

7.  $\frac{x-tx'}{t+xx'} = 2$

8.  $tx' + x = \log(x')$

9.  $(t \cos(x) + \sin(2x))x' = 1$

10.  $x' = (4t + x - 3)^2$