

**Practice Problems**

These problems are not to be handed in, but try them first; also try the even problems if you need more practice.

- From §6-3 (pages 379–382): 1–11 odd, 59, 61, 63.

The answers to these should be in the back of your textbook.

**Due Problems**

These problems are due December 1 Thursday.

- 1 Solve for  $y$  as a function of  $x$ :

$$\frac{dy}{dx} = \frac{x}{y}.$$

(Include at least one intermediate step with explicit indefinite integrals. Don't forget the arbitrary constant!)

- 2 Solve for  $x$  as a function of  $t$ :

$$\frac{dx}{dt} = x^2, \quad x = 0 \text{ when } t = 0.$$

(Include at least one intermediate step with explicit integrals.)

- 3 **Extra credit:** Find an algebraic equation relating  $p$  and  $q$ :

$$\frac{dq}{dp} = \frac{q(1-q)^2}{p(1+p)}.$$

(Include at least one intermediate step with explicit indefinite integrals. Go to <http://integrals.wolfram.com/> to find the integrals that you need.)