# Practice Problems 2

Math 4B, Spring 2017, Dr. Paul

Practice problems are for your own benefit. You won?t turn them in or have them graded, but I have the expectation that you have done these when I write my tests. You can check answers with a TA, in Math Lab, or with the professor.

1. Find the general solution to $y' = y\ln(y)$, and sketch the phase line.
2. Sketch a slope field for $y' = x - y$.
3. Suppose $y' = -2y$ with $y(0) = 50$. If you use a step size of $\Delta t$, what estimate would Euler's Method give you for $y(5)$?
4. Use a computer to sketch the solutions to $y' = \dfrac{2x}{3y^2 - 1}$ for initial values $y(0) = -2, -1, 0, 1, 2$. You can use `http://www.desmos.com`.
5. For the solution to $y' = \dfrac{2x}{3y^2 - 1}$ with $y(0) = 1$, what are the inflection points?