Homework Week 2: Due Tuesday 4/12

- pages $34 - 35$ $\#2, 3, 4, 5$
- page 56 $\#2, 3$

- Turn in your Excel worksheets for Examples 2.4.1
  Please save this as Lastnames2.4.xls.

- Solve the following **exact** differential equations:
  1. $(y^3 - y^2 \sin x - x)dx + (3xy^2 + 2y \cos x)dy = 0$
  2. $(\tan x - \sin x \sin y)dx + \cos x \cos y dy = 0$
  3. $(4y + 2x - 5)dx + (6y + 4x - 1)dy = 0$, with $y(-1) = 2$.

- Solve the following **exact** differential equations using **integrating factors**
  1. $(y' + 3x^2 y = x^2$
  2. $(1 + e^x)\dfrac{dy}{dx} + e^x y = 0$
  3. $x\dfrac{dy}{dx} + (3x + 1)y = e^{-3x}$