Questionaire – April 4, 2014

1. Have you taken Math 22 or Math 24 (Linear Algebra)?

   yes : **3**   no : **13**   Currently: **6**

2. Below are my office hours. Which ones can you absolutely NOT make it to?

   10-11 am Monday : **19**   3:30-4:30 pm Wednesday : **5**   10-11 am Friday : **18**

3. Write down a question, comment, or suggestion you have pertaining to the course.

   See next sheet

4. Check if the following are exact.

   (a) $3t^2 + t + (4ye^y + 2y)y' = 0$

   $\underbrace{}_{M}\ \underbrace{}_{N}$

   Check if $M_y = N_t$:

   $M_y = 0$, $N_t = 0$, equal, so exact

   | Correct: **19**
   | incorrect: **3**

   (b) $5t + 5y^2 + 5tyy' = 0$

   $\underbrace{}_{M}\ \underbrace{}_{N}$

   $\left.\begin{array}{l} M_y = 10y \\ N_t = 5y \end{array}\right\}$ not equal, so not exact

   | correct: **19**
   | incorrect: **3**

5. Find the general solution of the 2nd order differential equation: $y'' - 3y' + 2y = 0$.

   Char eqn: $r^2 - 3r + 2r = 0$

   $(r-1)(r-2) = 0$

   $r_1 = 1,\ r_2 = 2$

   So general solution is $C_1 e^t + C_2 e^{2t}$

   | Correct: **18**
   | correct, ~~except~~ wrong roots! : **2**
   | incorrect: **2**

Questionaire Responses – April 4, 2014

1. **I'm still catching up/I just enrolled/I need to review.** For all missed classes, you should try to get the notes from someone in the class.

2. **Could you have office hours on Tuesday/Thursday (mornings)?** Unfortunately, I am busy on Tuesday and Thursday mornings. However, I will add some in the afternoon, and you're welcome to come see me during x-hour, during which everyone should be available.

3. **I like the roadmaps.** Good! We'll continue building this roadmap as we go along.

4. **Looks interesting so far/going well so far/seems straightforward/good.** Great!

5. **Examples are helpful.** Good to hear. We'll keep doing lots of examples in class.

6. **I'd like more information about the paper.** For the paper, you will work in pairs. As a class, we will discuss a mathematical model of some biological process that involves some system of differential equations. Each pair will receive some question about the model and you will run numerical experiments using the applets (or Matlab, if you know how to use it) to help you answer this question. You will then write up your results. We will give you information about the rubric and format of the paper after the midterm.

7. **I need to review finding integrating factors for exact equations.** For a complete solution of one, see the example I've posted on the website entitled "Example from April 2."

8. **Congratulations on your thesis!** Thank you!!