

**Intensive Calculus - Math 134**  
**Spring 2008**  
**Professor Anderson**  
**Exam 3 Information**

The thir exam is scheduled for **Thursday, April 24, 7 - 8:30 PM**. The exam will be based on problem sets 7 - 9 and quizzes 8 - 10. We will review in class the day of the exam and Marshall will hold a review session at a time to be announced.

**Topics and suggested review problems:**

- Center of mass (p. 495 #24).
- Work (p. 494 #19, p. 480 #17).
- Consumer/producer surplus (p. 495 #25).
- Probability density functions, mean, median (p. 495 #29).
- Exponential random variables (p. 495 #31).
- Normal random variables (p. 495 #30).
- Checking that functions satisfy given differential equations (p. 551 True-False # 2).
- Separation of variables (p. 551 #2b, 552 #7).
- Exponential growth/decay (p. 552 #11, 13).
- Mixing problems (p. 553 #18).
- Other applications (p. 552 #16 - use Newton's Law of Cooling, #17 - the equation is  $dI/dt = kI(5000 - I)$ , where  $k$  is the number of infected people).
- Find equilibrium solutions of differential equations, determine regions where solutions are increasing/decreasing (p. 551 True-False #1, p.551 #1b).
- Sketching direction fields (p. 551 #2a).
- Using direction fields to sketch and describe solutions of differential equations (p. 551 #1a).
- Euler's method (p. 552 #3b).
- Finding limits of sequences (p. 632 #1, 3).