

# Exam IV Study Aid

Exam IV : Sections 5.1-6.4  
Friday, December 6th (In Class)

Our fourth in-class exam will cover all of the material we have discussed since our third exam. The format will be similar to that of our other in-class exams. You will have the entire class period (50 minutes) to complete the exam (you may leave once you are finished).

Below is a list of the main concepts or definitions you should definitely know and be comfortable with. (Note: this list is not a comprehensive list of all the topics we have learned in Sections 5.1 through 6.4, it is simply a list of some of the most important topics. Hence, as a warning, there may be topics on the exam which are not listed below – i.e. don't simply study this list and nothing else!)

- |                                         |                                                  |
|-----------------------------------------|--------------------------------------------------|
| 1. Left/Right Riemann Sums              | 6. Area between two Curves                       |
| 2. Definite Integrals                   | 7. Symmetry and Definite Integrals               |
| 3. The Fundamental Theorems of Calculus | 8. Antiderivatives<br>(Graphically/Analytically) |
| 4. Average Value of a Function          | 9. Properties of Indefinite Integrals            |
| 5. Properties of Definite Integrals     | 10. Differential Equations                       |

Finally, here is a list of good practice problems that might help you in studying. All of the problems were picked to be odd numbered so that their solutions would be found in the back of the book.

- Section 5.1 – 1, 3, 9, 11, 17, 27
- Section 5.2 – 1, 3, 15, 19, 21, 23, 29, 31
- Section 5.3 – 1, 3, 5, 7, 21
- Section 5.4 – 1, 3, 5, 7, 11, 13, 15, 23, 27, 31
- Section 6.1 – 5, 7, 9, 11
- Section 6.2 – 1, 3, 5, 9, 11, 13, 15, 23, 27, 37, 41, 43, 49, 51, 53, 59, 67, 71
- Section 6.3 – 1, 3, 5, 9, 11, 15, 19, 27, 33
- Section 6.4 – 5, 7, 11, 13, 15, 17, 35, 37