

Exam II Study Aid

Exam II : Sections 7.6-7.7, 8.1-8.2, 8.4-8.5, 9.1-9.3
Thursday, March 27th (In Class)

Our second in-class exam will cover all of the material we have discussed since our first exam. You will have the entire class period (75 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, it is simply a list 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!)

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| 1. Improper Integrals (of both types) | 10. Work done |
| 2. Convergence/Divergence of Improper Integrals | 11. Differences in SI/British units |
| 3. Comparison of Improper Integrals | 12. Gravitational Force |
| 4. Standard Improper Integrals (for comparison) | 13. Force and Pressure |
| 5. Areas/Volumes by Slicing | 14. Sequences and Convergence |
| 6. Volumes of Revolutions | 15. Geometric Series |
| 7. Volumes of Regions with Known Cross-Sections | 16. Convergence of Series |
| 8. Arc Length | 17. Integral Test |
| 9. Density | |

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 7.6 – 5, 7, 9, 13, 17, 19, 27, 33, 49, 51, 53, 57
- Section 7.7 – 1, 3, 9, 11, 15, 19, 25, 35
- Section 8.1 – 1, 3, 9, 11, 13, 15, 17, 25, 27
- Section 8.2 – 1, 3, 5, 9, 11, 15, 17, 25, 29, 47, 55
- Section 8.4 – 1, 3, 5, 17, 43
- Section 8.5 – 1, 3, 5, 7, 9, 13, 15, 17, 19, 25, 47
- Section 9.1 – 1, 5, 13, 17, 23, 25, 27, 63, 65, 67, 71
- Section 9.2 – 1, 3, 5, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 49, 53
- Section 9.3 – 1, 3, 5, 7, 13, 15, 17, 23, 27, 31, 53, 55, 57, 59, 63