

Math 163 — SYLLABUS and HOMEWORK: FALL 2006

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- 1 Aug 21 : §7.1 Inverse Functions. p.420: 3-14,19-23,20*,25,26*,27,29,31,32*,33,34*.
- 2 Aug 23 : §7.1, 7.2* Natural Logarithm. p.420: 35,36*,39,40*,43. p.458: 1-8 (all),4*,6*, 9-11,12*.
- 3 Aug 25 : §7.2* Natural Logarithm (ctd). p.458: odd 13-27,26*,31,34,35,37,42*,44*,odd 59-67,64*,66.
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- 4 Aug 28 : §7.3* Exponential Fcn §7.3*:2,3,6,9,10*,12,19-21,22*,23,25,27,28*,odd31-43,48*,58*,odd69-75
- 5 Aug 30 : §7.4* Log and Exp. p.475: 3,4,7,8*,9,12*,13,18*,19,odd 23-37,31*,odd 41-45,44*
- 6 Sep 1 : §7.5 Inverse Trig Functions. p.483: 1,2,3,5,6*,11,12,15,16,29,22*,23,24,38*,46,odd 59-69.
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- Sep 4 : LABOR DAY
- 7 Sep 6 : §7.6 Hyperbolic Functions. p.491: 1,2,3,4*,5,7,8*,17,23,30*,odd 31-41,55,56*,57,59.
- 8 Sep 8 : §7.7 L'Hopitals Rule. p.501: odd 5-21,18*,37,41,47,49,50*,51,53,54*,58*,75*,79,82*,85,86*.
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- 9 Sep 11 : §7.7 Rates of Growth. see handout.
- 10 Sep 13 : REVIEW
- 11 Sep 15 : **EXAM 1** (§§7.1-7.7)
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- 12 Sep 18 : §8.1 Integration by Parts. p.516: 3,4*,7,9,10*,13,15,16*,20*,21,33,34*.
- 13 Sep 20 : §8.4 Partial Fractions. p.540: 2,3,5,7,8*,9,11,12*,17,22*,23,31,34*.
- 14 Sep 22 : §8.5 Review. Derive some of the formulas in back of book. Include easy trig subst.
HW: p.546: 3,5,9,14*,17,23,24,29. Derive formulas 47*,49*,54*,64,89*,96,100 in back.
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- 15 Sep 25 : §8.6 Use integral tables - catchup. p. 551: 6*,9,10*,17,18*,20*,23,27,29.
- 16 Sep 27 : §8.7 Numerical Integration. p.563: 1*,3,7,8*,13,16*,28*.
- 17 Sep 29 : §8.7,9.1 Arclength. §8.7: 29,30*,33,36*,37(change "y-axis" to "x-axis"), §9.1: 3,8*,22*,25,26*
- Last day to drop without a grade*
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- 18 Oct 2 : §8.8 Improper Integrals. p.573: 1,2*,3,5,6*,9,11,12*,15,16*,18*.
- 19 Oct 4 : §8.8 Improper Integrals. p.573: 23,27,29,31,38*,49,50*,51,53,55,56*.
- 20 Oct 6 : §12.1 Sequences. p.746: 1,2*, odd 3-37,10*,12*,16*,20*,28*,32,34*.
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- 21 Oct 9 : REVIEW
- 22 Oct 11 : **EXAM 2** (§§8.1-8.8,9.1,12.1)
Oct 13 : FALL BREAK
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- 23 Oct 16 : §12.2 Series. p.756: 1,2,odd 3-31,18*,20*,24*,26*,41,42*, p.822: Concept check 4*.
- 24 Oct 18 : §12.3 Integral Test. p.765: odd 1-23, 4*,12*,20*,32,33*.
- 25 Oct 20 : §12.4 Comparison Tests. p.770: odd 1-31,2*,8*,10*,32*,37,45.
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- 26 Oct 23 : §12.5 Alternating Series Test. p.775: odd 1-23,2*,4*,10*,28*.
- 27 Oct 25 : §12.6 Absolute Convergence, Ratio Test. p.781: odd 1-29, 2*,14*,18*,31*,33*.
- 28 Oct 27 : §12.7 Review Series Convergence Tests. p.784: odd 1-37, 1*,5*,7*,11*,15*,23*.
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- 29 Oct 30 : §12.8 Power Series. p.789: odd 1-9,2*,4*,6*,10*,15,17,19,20*,23,29*,30.
- 30 Nov 1 : REVIEW/CATCH-UP
- 31 Nov 3 : §12.9 Functions as Power Series. p.795: odd 1-17,2,6*,12*,14*,23,26*,27,28*.
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- 32 Nov 6 : §12.10 Taylor Series. p.806: 1,2*,3,4*,5,11,13,14*,23,25,27,28*.
- 33 Nov 8 : §12.10 Taylor Series. p.806: 30*,31,33,35,39,41,43,45*,48*,49,51,55,57,59,60*, 99*: Find the
MacLaurin Series for (a) $f(x) = (1+x)^3$, (b) $f(x) = (1+x)^6$.
- 34 Nov 10 : §12.12 Applications. p.819: 29,30*,31*,33*. p.824: 60.
- Last day to drop without Dean's approval*
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- 35 Nov 14 : REVIEW
- 36 Nov 16 : **EXAM 3** (§§12.2-12.12)
- 37 Nov 18 : Appendix G Complex Variables. p.A55: odd 1-17, odd 25-31,26*, 30*, 41-46.
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- 38 Nov 20 : Appendix G Complex Variables. p.A55: 19-23,24*, Handout: Problem Set 1.
- 39 Nov 22 : Appendix G Complex Variables. p.A55: 48*, Handout: Problem Set 2.
Nov 24 : THANKSGIVING BREAK
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- 40 Nov 27 : §11.3 Polar Variables. p.713: 3,4*,5,7-13,10*,15,16,18*,21,24*,25,29-32,30*,35,37,47,54*,55-57.
- 41 Nov 29 : §11.1 Parametrization of Curves. p.693: 1-4,odd 5-27,10*,16*,26*,28*,43*.
- 42 Dec 1 : §11.2 Slopes, Tangent lines, Arclength. p.702: odd 1-7,11,15,22*,26*,45,48*,51.
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- Dec 4 - Dec 8 : REVIEW WEEK
- Saturday, Dec 9 : **FINAL EXAM** (10:00am-12:00pm, Room TBA)