

**MATH 1042 RECOMMENDED HOMEWORK PROBLEMS SUMMER
2009**

Text: **Jon Rogawski**, *Calculus: Early Transcendentals*, First Edition, W.H. Freeman and Co.

Chapter 5: THE INTEGRAL

5.2: 13, 14, 15

5.4: 4, 5, 15, 18, 21, 22, 24, 27, 28, 30, 35, 39, 40, 43

5.5: 1-3, 6, 7, 9-12 (in Problems 9-12 you do not need to draw motion diagrams), 17

5.6: 8-11, 13-16, 19, 19-21, 23-25, 27, 28, 33-43 odd, 47, 51, 55, 56, 57, 58, 61, 63, 65, 67-69, 77, 81, 83, 86, 89, 91, 94, 95

5.7: 1, 4-7, 13-25 odd, 37, 43, 49, 51, 53, 55, 59

Chapter 6: APPLICATIONS OF THE INTEGRAL

6.1: 1-13 odd, 16, 17, 21, 25, 29, 34, 37, 41, 45, 49

6.2: 9, 13,

6.3: 3, 5, 9, 11, 12, 13, 14, 15, 17, 20, 21, 25, 28, 41, 50

Chapter 7: TECHNIQUES OF INTEGRATION

7.2: 1, 3, 4, 5, 6, 7, 9, 12, 15, 17, 23, 24, 25, 45, 47, 49, 50, 55, 57, 58, 61

7.3: 2, 3, 5, 7, 9, 10, 11, 15, 16, 17, 19, 25, 26, 27, 29, 32, 33, 36, 38, 45, 47, 52, 61 (do not use reduction formulas in Problems 9-61)

7.4: 1-4, 5, 6, 8, 9, 17, 19, 21, 25, 35, 36, 43-51, 53

7.6: 1, 7, 9, 13, 15, 17, 25, 27, 28, 30, 31, 33, 37, 49

7.7: 1-4, 5-21 odd, 27, 29, 33, 35, 36, 37, 39, 43, 45, 46, 47, 51, 53, 63, 65, 67, 69, 78, 79

Chapter 10: INFINITE SERIES

10.1: 1, 3, 7, 12, 13, 14, 15, 17, 19, 21-23, 31, 33, 35, 38, 39, 43-51 odd, 55, 57, 59-61

10.2: 4, 9, 11, 12, 13, 16, 17, 19, 20, 21, 24, 26, 27, 28-30, 32, 33

10.3: 1, 3, 5, 7, 9, 10, 18, 19, 21, 23, 25, 27, 29, 30, 35, 36, 38, 39, 40 (in Problems 1-13, 19-40 use any of the *Integral*, *p-Series*, *Comparison* or *Limit Comparison* tests developed in this section. Use the simplest test possible.) 45, 49-57, 61, 63, 67, 71

10.4: 1, 2, 3-8, 11, 19, 21-23, 25

10.5: 1-17 odd, 19-22, 35, 37, 38, 39, 41, 42, 43, 44, 45, 48 (You can apply either the *Ratio* or *Root* test, whichever works best, in any problem in this section.) In addition, use the Root or Ratio test to establish convergence of the series in Problem 9, Section **10.3** and absolute convergence of the series in Problem 25, Section **10.4**.

10.6: 1-4, 7, 10-13, 15, 16, 19, 20, 21, 26, 27, 29, 31, 33, 38, 40

10.7: 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 15, 19, 26, 29, 31, 37, 47 (express the integral as a power series in x only), 48 (do not evaluate $F(1)$), 49, 50-52 (in Problems 50-52 express each integral as an infinite sum only), 55, 56, 64, 66