Math 112, Spring 2013 Homework Problems

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| Section | Problem numbers |
| 5.5 The Substitution Rule | 1-73 odd, (omit 37) |
| 6.1 Areas Between Curves | 1-25 odd |
| 6.2 Volumes | 3, 9-17 odd, 23, 25, 29, 43, 49, 51, 61 |
| 6.3 Volumes by Cylindrical Shells | omit |
| 6.4 Work | 2, 3, 5, 7, 11, 15, 19, 21-24 |
| 6.5 Average Value of a Function | 5, 7, 8, 9, 15, 17 |
| 7.1 Integration by Parts | 1, 2, 3-41 odd (omit 25)  |
| 7.2 Trigonometric Integrals | 1-37 odd, 47, 49 |
| 7.3 Trigonometric Substitution | 1-29 odd (omit 25), 37 |
| 7.4 Integration of Rational Functions by Partial Fraction Decomposition | 1-9 odd, 15-27 odd, 35, 39, 41 |
| 7.5 Strategy for Integration | all odd (omit 53) |
| 7.6 Integration using Tables and CAS | omit |
| 7.7 Approximate Integration | 1, 5, 7, 19, 30, 31 |
| 7.8 Improper Integrals | 1-39 odd, 49-53 odd |
| 8.1 Arc Length | 7-15 odd, 35, 37 |
| 8.2 Area of a Surface of Revolution | omit |
| 8.3 Applications to Physics and Engineering | 1-11 odd, 14, 17 |
| 8.4 Applications to Economics and Biology | 1-5 odd, 15, 17 |
| 8.5 Probability | omit |
| 9.1 Modeling with Differential Equations | 1, 7, 9, 13 |
| 9.2 Directions Fields | 1, 3-6, 11 |
| 9.3 Separable Equations | 1-19 odd, 29, 31, 39, 45, 48 |
| 9.4 Models for Population Growth | 1, 5, 9 |
| 9.5 Linear Equations | omit |
| 11.1 Sequences | 1-19 odd (omit 9), 23-51 odd (omit 45), 73, 75, 77  |
| 11.2 Series | 1-5 odd, 15-45 odd, 51, 53, 57, 69 |
| 11.3 The Integral Test and Estimate of Sums | 1-27 odd (omit 13), 37  |
| 11.4 The Comparison Tests | 1-31 odd (omit 21 and 29) |
| 11.5 Alternating Series | 1-15 odd, 23 |
| 11.6 Absolute Convergence and Ratio and Root Tests | 1-25 odd, 29 |
| 11.7 Strategy for Testing Series | Determine absolute convergence, conditional convergence or divergence. All odd (omit 17 and 29) |
| 11.8 Power Series | 1-23 odd (omit 21) |
| 11.9 Representations of Functions as Power Series | 1, 5-9 odd, 13, 15, 17, 25, 27, 29 |
| 11.10 Taylor and Maclaurin Series | 1-19 odd, 29-37 odd, 47, 48, 51, 55, 63 |