

MAT120: Integral Calculus and Differential Equations

Exercise Sheet

Text Book: Calculus Haward Anton

Chapter	Exercise
5.4	27-30, 35-40, 41-44, 45-48 The definition of Area as a limit: Sigma notation
5.3	15-56 Integration by Substitution
5.9	5-22,32,33,35-40 Evaluating Definite Integral by Substitution
7.1	1-30 Overview of Integration Methods
7.2	10-35 Integration By Parts
7.4	3,5,7,19,23,27 Trigonometric Substitution
7.5	9-31 Integrating rational functions by partial fractions
7.8	3-32 Improper Integrals
7.3	5,7,13,19,43,44,47 Integrating Trigonometric functions
	Gamma and Beta Function from lecture notes
5.5	13-15,22,23,25,27,37 The Definite Integral
6.4	3-8, 27-32 Length of a Plane Curve
6.5	1-4, 5-8 Area of Surface of Revolution
14.1	1-16 Double Integrals
14.2	1-8 ,15-18,19,21,23,24 Double Integrals over non rectangular regions
14.3	27-34 Double Integrals in polar Coordinates
14.5	1-8,9-12 Triple Integrals
14.6	9-12, 13-16, 17-20 Triple Integrals in Cylindrical and Spherical Coordinates
14.7	5-8, 21,22 Change of Variables in Multiple Integrals, Jacobians

Text Book: Zill

2.2	1-14, 19-26 Separable Variables
2.3	3-17, 19, 24, 25, 26, 29, 30 Linear Equations
2.4	1-20, 21-26 Exact Equations
4.3	1-22, 29-34 Homogeneous linear equations with constant coefficients
4.4	1-15, 27-31 Undetermined Coefficients-Superposition Approach
3.1	Example 1-4, 7 and exercise 1-5, 13, 29 Linear Models

***** You are strongly suggested to practice, however, problems are not limited to these only anyway***