

Math 1NN3

Week 1: Integration Review, 7.3

- Review of Substitution and Integration by Parts
- Trig Substitution

Week 2: 7.4, 7.8

- Partial Fractions
- Improper Integrals

Week 3: 11.1, 11.2, 11.3

- Sequences
- Series
- The Integral Test and Estimates of Sums

Week 4: 11.4, 11.5, 11.6

- The Comparison Tests
- Alternating Series
- Absolute Convergence and the Ratio and Root Tests

Week 5: 11.8, 11.9, 11.10

- Power Series
- Representations of Functions as Power Series
- Taylor and Maclaurin Series

Week 6: 11.11, 11.12, 9.1

- The Binomial Series
- Applications of Taylor Polynomials
- Modeling with Differential Equations

Week 7: 9.2, 9.3, 9.4

- Direction Fields and Euler's Method
- Separable Equations
- Exponential Growth and Decay

Week 8: 9.6, 17.1, 8.1

- Linear Equations
- Second-Order Linear Equations
- Arc Length

Week 9: 10.3, 14.1, 14.2

- Polar Coordinates
- Functions of Several Variables
- Limits and Continuity

Week 10: 14.3, 14.4, 14.5

- Partial Derivatives
- Tangent Planes and Linear Approximations
- The Chain Rule

Week 11: 14.6, 15.1, 15.2

- Directional Derivatives and the Gradient Vector
- Double Integrals over Rectangles
- Iterated Integrals

Week 12: 15.3

- Double Integrals Over General Regions
- Review