

# Power Series

## Reading

Section 11.6

## Problems

- Practice Problems: 11.6 5, 7, 9, 11, 15, 17, 21, 22, 26, 27, 35, 39, 45, 59
- Problems to turn in: 11.6 6, 10, 16, 20, 40
- Challenge (optional): 11.6 46, 48, 51, 52

## Topics to know

1. Power series definition
2. Interval and Radius of convergence (theorem 1)
3. Examples of finding intervals of convergence (examples 1, 2)
4. Power series “skipping terms” (example 3)
5. Geometric series as a power series
6. Deriving other series from geometric (examples 4, 5)
7. Differentiation and Integration of power series (theorem 2)
8. Applications (examples 6, 7)
9. Power series as solutions to differential equations. Exponential as a series.