

## Homework Assignment for Week 03

1. Section 10.6: Problems 4, 11, 25, 26, 28, 29, 30, 35, 39, 43, 49, 53.
2. Section 10.7: 7, 11, 15, 19, 23.

Hint: To find the radius of convergence for  $\sum a_n x^n$ , apply ratio test or root test to  $\sum |a_n x^n|$ .

3. Find a power series that converges on  $(1, 3)$  and diverges otherwise. Do the same for  $(1, 3]$ ,  $[1, 3)$  and  $[1, 3]$ , respectively.