MATH 427: COMPLEX ANALYSIS (SUMMER 2018)

Homework 6: due Monday, Aug 13th.

- Section 3.3: 2, 5, 8.
- Section 3.4: 3, 4, 9.

Additional problem:

(1) Suppose the radius of convergence of the series $\sum_{k=0}^{\infty} c_k z^k$ is $R \in (0, \infty)$. Find the radius of convergence of

$$\sum_{k=0}^{\infty} (2^k - 1) c_k z^k.$$

(2) Find the power series expansion of

$$\int_0^z e^{w^2} dw$$

about $z_0 = 0$ and determine the radius of convergence of the series.