Homework Set 10

DUE: APRIL 29, 2019 (AT THE BEGINNING OF CLASS)

To be handed in

Please write your solution to Problem 1 on a single sheet of paper!

1. Find the interval of convergence of each of the following power series (remember to check the endpoints!):

   a) $\displaystyle\sum_{n=1}^{\infty} \frac{x^n}{2n}$

   b) $\displaystyle\sum_{n=1}^{\infty} 3\left(\frac{x}{4}\right)^n$

   c) $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n(x-2)^n}{n!}$

   d) $\displaystyle\sum_{n=1}^{\infty} \frac{(-1)^n (x-1)^n}{n^3 \, 2^n}$

   e) $\displaystyle\sum_{n=1}^{\infty} \frac{2^n (x+3)^n}{\sqrt{n}}$

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2. Textbook (5th edition) Section 9.8, Exercises 15-30, 45-47