Math 300: Homework 1 (20 points). The questions are from Saff and Snider *Fundamentals of Complex Analysis*, Third Edition.

Only turn in solutions to the following problems that are highlighted in blue. However, you are responsible to understand the remaining problems.

- **Section 1.5:** Problems: 5(a), 5(e), 11, 16.

- **Section 2.1:** Problems: 3(a), 3(b),3(c), 3(d), 5,6,10(a), 10(b), 11(a),

- **Extra Problem 1:** Prove that $|e^{-z^3}| \leq 1$ for all z in $-\pi/6 \leq \arg(z) \leq \pi/6$.