MA/PHY507 Spring 2018
Problem Set 2
DUE: Monday, 29 January 2018

Read Arfken, chapter 11, sections 11.1–11.3

1. Compute the complex number $(1+i)^{(2-i)}$ with the principal branch of the logarithm. Clearly write the real and imaginary parts.

2. Find the polar form of $(2-3i)^4$. Clearly write the real and imaginary parts.

3. Solve $\sin z = \frac{\sqrt{2}}{2}$ for z. Make sure you verify your result by solving the appropriate equations.

4. Arfken, section 11.2, problems 11.2.1, 11.2.3, 11.2.9 (parts b) and f)).