1. (a) Evaluate $\cos(7\pi/8)$ exactly.
(b) Can you evaluate $\cos(\pi/2^n)$ for all $n \in \mathbb{N}$?

2. Prove the law of sines. You may use any definition for $\sin$ that you wish.

3. Use the power series definition of $e^x$ to show that $e^{x+y} = e^x e^y$.

4. Complete either Problem 3 or Problem 4 (your choice) from Section 9.2.3 in the handout.