

## Chem 442: Homework for lecture L19

(only turn in **BOLD** assignment first lecture next week of classes; do all assignments)

1. Problem 5.1 in the book. Remember from Lecture 13 that this is indeed one of the two degenerate eigenfunctions for the particle on a ring/circle, which we combined and generalized as  $e^{iM\phi}$ .
2. **Problem 5.3 in the book (turn in)**. This is an important exercise as it will help you to think about eigenvalues of angular momentum operators, and the number of different values  $l$  or  $s$  can take.