

Chemistry 1B
Homework #1 (#1-#13, S1-S3)

Required (submit via [WebAssign](#))

1. Zumdahl 12.21
2. Zumdahl 12.23
3. Zumdahl 12.29
4. Zumdahl 12.32
5. Zumdahl 12.35
6. Zumdahl 12.38 (a,d only)
7. Zumdahl 12.40
8. Zumdahl 12.49
9. (similar to Zumdahl 12.58)
Concerning the hydrogen atom. What information do we get from the values of the quantum numbers n , ℓ , and m_ℓ ?
10. Which of the following orbital designations would not be allowed:
1s, 1p, 7d, 9s, 3f, 4f, and 2d ?
11. Zumdahl 12.62
12. Zumdahl 12.64
13. Zumdahl 12.66

Section

- S1. Zumdahl 12.41
- S2. For what sizes of particles must one consider both wave and particle properties?
Which experiments indicated that particles must be treated as waves? Which experiments indicated that waves have particle-like properties?
- S3. What is the difference between the work function and the ionization potential?