Physics 108 Homework Assignment#1 (due on 4/9/2018)

**Reading materials**:

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| *Pedrotti 3rd Edition:* | **Chapter 1**: 1-1; 1-2; 1-3;<br>**Chapter 2**: 2-1; 2-2; 2-4; 2-5; 2-6; 2-7; 2-8 |
| *Lecture Notes:* | pp. 1-17 |

**Homework**: (Pedrotti 3rd Edition)

1. 2-4
2. 2-5
3. 2-6
4. 2-8
5. 2-9
6. 2-10
7. 2-32
8. 2-34
9. Derive the refraction equation with $n_2 < n_1$, $s_1 > 0$ (the object is on the left side or the side before refraction), and $R < 0$ (the center of curvature C on the left side or the side before refraction). From your result, show that $n_1/s_1 + n_2/s_1' = (n_2-n_1)/R$ if the sign convention for $s_1$, R, and $s_1'$ is used.
10. **Optional for two extra points**: Derive the refraction equation with $n_2 < n_1$, $s_1 < 0$ (the object is on the right side or the side after refraction), and $R > 0$