1. Carroll & Ostlie: problem 10.3
2. Carroll & Ostlie: problem 10.4
3. Carroll & Ostlie: problem 10.10
4. Derive the expression for the thermal conductivity of non-degenerate electrons,
   \[ K = \frac{3^{1/2} k^{7/2} T^{5/2}}{2\pi m^{1/2} e^4} \]
5. (a) What is the dominant source of opacity near the surface of the Sun? (b) Why is this not the main source of opacity near the center of the Sun?