Due: Friday, Oct. 22 at the beginning of class.

READING: CARTER: CHAPTERS 5 and 6
                SCHROEDER: CHAPTER 4

BOOK PROBLEMS: CARTER: 5.3, 5.4, 5.9, 6.7, 6.8, 6.13
                   SCHROEDER: 4.7, 4.8, 4.14, 4.21 (parts a,b,c only)

ADDITIONAL PROBLEMS:

Question 1: In class and in the book we have diagrammed the Carnot cycle on a set of pressure volume (PV) axes. Sketch the Carnot cycle on two different sets of axes: temperature and volume (TV) and temperature and entropy (TS). Label the four "corners" of your diagrams (a,b,c,d) and indicate the direction of travel with arrows. Your arrows and labels must correspond with the (PV) diagram in Carter fig. 5.7 to get credit.

Question 2: Show that $\oint \frac{dq_{rev}}{T} = \oint dS = 0$ for the Carnot cycle. Briefly explain how this result allows you to conclude that entropy is a state function.

Question 3: Calculate ΔS for the process outlined in Carter problem 4.13.