

Lecture 9

Pre-Lecture Preparation (due within the first 5 minutes of class):

- Read pages 653 – 660 in the textbook (Serway 9th edition) and do the following:
 - 1) Quick Quizzes 22.1 – 22.2
 - 2) Book Objective Questions (p. 679): 1 and 3
 - 3) Book Problems (p. 681): 3

Goals for the Lecture:

- 1) Understand the Second Law of Thermodynamics and how it applies to heat engines
- 2) Understand the efficiency of a heat engine and how to solve problems using this concept
- 3) Understand heat pumps, refrigerators, and their coefficient of performance (COP) and how to use COP in solving problems
- 4) Understand the difference between reversible and irreversible processes

Post-Lecture Study Guide (I do not collect this):

Review the worksheets or other lecture material within 24 hours (preferably the same day as the lecture) to reinforce the ideas. Review the pre-lecture questions to make sure you understand them.

Do problems:

Ch 22: Conceptual Questions: 1

Ch 22: Objective Questions: 6

Ch 22: Problems: 5, 9, and 10

Continue with the additional recommended study problems from chapter 22