Thermodynamics
Homework Seven
Due Friday November 8, 2013

This assignment will be a bit longer than usual, since it covers 1.5 weeks instead of one. However, I think these problems will be much less mathematically demanding than those on the last problem set, and will involve a good bit more interesting physics.

1. Problem 4.18 Optional. This problem involves a modest amount of algebra and could be a good review of the physics of adiabatic and isothermal processes.

2. Problem 4.20 Optional. This problem involves a less modest amount of algebra. I'm not sure the process of doing this problem will lead to deep understanding, but the final result—the efficiency of a Diesel engine—is a useful and important result, although it is not a simple formula.

3. Problem 4.24

4. Problem 4.26

5. Problem 5.4

6. Problem 5.6

7. Problem 5.11

8. Problem 5.20