

AE 3450 Thermodynamics and Compressible Flow
Assignment # 7

Note: Please show your work.

1) Problem 1 at end of Chapter 4 in John textbook.

2) Problem 4 at end of Chapter 4 in John textbook.

3) Problem 5 at end of Chapter 4 in John textbook. Assume $\gamma = 1.4$.

4) Problem 20 at end of Chapter 4 in John textbook. Note that for this problem, the picture in the book is a bit misleading. The shock that you see in the nozzle is at a location where the area is 0.1 m^2 . However, that is NOT the minimum area of the nozzle. Despite the picture, the shock is NOT at the throat, but instead is in the diverging section.