

### *HW 5 Solution Procedure*

→ i) Show that given  $P_{0_e} / P_{0_1}$  is inconsistent with isentropic nozzle

→ ii)  $\frac{P_{0_e}}{P_{0_1}} = g(M_1) \rightarrow$  Solve for mach number ahead of shockwave

→ iii)  $\frac{A_1}{A_1^*} = f(M_1) \rightarrow$  Solve for  $\frac{A_1}{A_1^*}$ ,  $A_1$  ahead of shockwave

→ iv)  $P_0 A^* = \text{constant} \rightarrow$  Solve for  $A_2^*$

→ v)  $\frac{A_e}{A_2^*} = f(M_e) \rightarrow$  Solve for exit plane mach number,  $p_e, T_e, V_e$

→ calculate performance and compare to isentropic nozzle

→ Hmmmmm, what's happening here?