Tips for HW17

Problems 1 and 2

* Start with first law for open systems. Eliminate and cancel terms where appropriate. Remember when to use ideal gas relationships
* See sample problem posted on website
* If looking up thermophysical properties in EES, remember that there are options for “Real fluids” and for “Ideal gases.” Properties for ‘Helium’ will require two independent variables, where properties for ‘He’ will only require temperature.

Problem 2

* If an ideal gas is involved in an isenthalpic process, what does that say about the specific enthalpy change? What does that say about the temperature change inside the tank? What does that say about the specific internal energy change of the gas in the tank?

Problem 3

* Remember, ΔE and ΔU for a cycle = 0.
* η = what you want/what you pay for
* Part c) Assume a heat engine. Pay for Q\_in, want W\_out