# Tips for HW10

## FE-Style Questions

* + The units for Ru are energy per ( \_\_\_\_\_ \* temp). What is the \_\_\_\_\_? How is that different for the gas-specific gas constant?
  + Can you identify what each of the terms means?

## Practice Problems

1. From the definition of quality, mg = m\*x, and mf = m\*(1-x). If you apply First Law of Thermo to the system you should be able to find Q.
2. To plot this on EES you can use a parametric table to solve for x and Q as a function of T2 (from 500-260 °F).

Once you have created a property plot, use the “overlay plot” to add data from your parametric table to your plot.

1. Be careful with units. You have things like psi (with square inches in the denominator) and ft3. If you do things mostly correct you will probably get an answer in units of ft-lbf. But you’re not done yet because you need to put your final answer in units of Btu.
2. Moving boundary work is ∫Pdv. Drawing the cycle on a P-v diagram will probably provide some great insight about getting the area under the curve for each step. Do make sure you’re keeping track of the signs though. A process moving from right to left (compression) will require work input. A process moving left to right will produce work output.