ME 201
Thermodynamics

Homework #5, Due Monday September 22, 2014

1. Determine the internal energy change as saturated liquid steam at 60°F goes to a two phase mixture of quality 0.40 at 60°F. Provide answers in SI units.

2. Give the behavior of entropy for steam when
   a. pressure increases, constant temperature
   b. quality increases
   c. temperature increases, constant pressure
   d. pressure decreases, constant entropy

3. Saturated vapor water at 130°C undergoes an isometric process to 0.4 MPa. Determine the final fluid phase and the enthalpy change.

4. Refrigerant-12 as saturated vapor at 0.5 MPa is isentropically compressed by a compressor in a refrigeration plant to 0.9 MPa. Determine the enthalpy change for the process and the final fluid phase.