

# ME 201

## Thermodynamics

### Homework 18, Due Monday, 4/10/2006

1. Determine the work per mass output of an adiabatic turbine with isentropic efficiency 0.83 that has a steam input of 15 MPa and 650°C and an outlet pressure of 50 kPa.
2. Refrigerant-134a enters an adiabatic pump at 90 psia and 60°F and exits at 120 psia and 62°F. For a flow rate of 12 kg/s determine
  - (a) the actual power required
  - (b) the isentropic efficiency