AME 20231
Homework 8
Due: Friday, 22 March 2013, in class

1. 6.80, let instead $P_1 = 12\ MPa$.

2. 6.103

3. 6.108

4. 6.109, let instead the temperature after combustion be $1600\ K$.

5. A tank containing $45\ kg$ of liquid water initially at $45°C$ has one inlet and one exit with equal mass flow rates. Liquid water enters at $45°C$ and a mass flow rate of $270\ kg/hr$. A cooling coil immersed in the water removes energy at a rate of $7.6\ kW$. The water is well mixed by a paddle wheel so that the water temperature is uniform throughout. The power input to the water from the paddle wheel is $0.6\ kW$. The pressures at the inlet and exit are equal and all kinetic and potential energy effects can be ignored. Determine the variation of water temperature with time. Give a computer-generated plot of temperature versus time.