ENSC 388

Assignment #5

Assignment date: Wednesday Oct. 14, 2009

Due date: Wednesday Oct. 21, 2009

Problem 1

A completely reversible heat pump produces heat at a rate of $100\ kW$ to warm a house maintained at $21\ °C$. The exterior air, which is at $10°C$, serves as the source. Calculate the rate of entropy change of the two reservoirs and determine if this heat pump satisfies the second law according to the increase of entropy principle.