Problem-based component #1

1. A piston/cylinder system contains 1 kg of water with volume 1.35 m­3 and temperature 85 deg C (state 1). Find the pressure and state of the water.
2. In an isobaric process, the piston is pushed inwards until the quality of the fluid reaches 40% (state 2). Then, the piston was fixed in place and the system pressure was increased to 200 kPa (state 3). Find the difference in specific internal energy from state 1 to state 3, and the work done during the process.