

MEMS 0051 - Introduction to Thermodynamics
Quiz #3

Name: _____

Problem #1

Determine the specific volume for water existing at $T=900^{\circ}\text{C}$ and $P=919 \text{ [kPa]}$

Problem #2

Consider helium taken at 298 [K] and a pressure of 150 [kPa] . The critical pressure and temperature are $P_c=227,000 \text{ [Pa]}$ and $T_c=5.19 \text{ [K]}$. Calculate the reduced temperature and pressure and determine if we can treat it as an ideal gas.

Problem #3

Determine the quality of water existing at 500 [kPa] with a specific volume of $0.20 \text{ [m}^3\text{/kg]}$