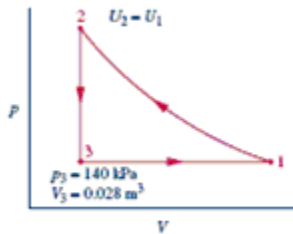


Quiz 2 AME230 February 4, 2008

Name _____

Write definitions for the following terms:

1. pure substance
2. phase
3. equilibrium
4. pressure
5. absolute temperature scale
6. manometer
7. gage pressure
8. absolute pressure
9. extensive property
10. intensive property



Shown in the figure above is a cycle executed in the following manner:

Process 1-2 is one of constant internal energy: $U_2 = U_1$

Process 2-3 is one of constant volume $V_3 = 0.028 \text{ m}^3$ and $P_3 = 140 \text{ kPa}$,

Process 3-1 is constant P where $W_{3-1} = 10.5 \text{ kJ}$

The net work for this cycle = -8.3 kJ

Answer the following questions:

- 1). what is the work in Process 2-3? W_{2-3}
- 2). what is the volume at state 1?
- 3). calculate the Work from state 1 to state 2: W_{1-2}
- 4). calculate the Q in the same process: Q_{1-2}