PROCESS DIAGRAM ACTIVITY Names­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1) Form in to groups of 3-4 and complete the questions (i) and (ii)

(i) Sketch the following processes on pressure-volume (P-V) and temperature-entropy (T-S) diagrams. Use the given starting point for all processes. Label the endpoint of each process with the appropriate letter. Assume ideal gas behavior.

(a) isentropic expansion

(b) isothermal expansion

(c) isochoric heat addition

(d) isobaric heat addition

(e) irreversible, adiabatic expansion

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V S

(ii) Give the sign of the work, heat, and change in internal energy for each process.

Assume ideal gas behavior.

W Q ΔU

(a) isentropic expansion

(b) isothermal expansion

(c) isochoric heat addition

(d) isobaric heat addition

(e) irreversible, adiabatic expansion