

i)

GIVEN

Piston-cylinder w/ CO(g) has 3-processes

process 1-2: Isobar @  $P_1 = P_2 = 5 \text{ bar} = 5 \times 10^5 \text{ Pa}$ ,  $V_1 = 0.2 \text{ m}^3 \rightarrow V_2 = 1 \text{ m}^3$ " 2-3: Isoval to  $P_3 = 1 \text{ bar} = 1 \times 10^5 \text{ Pa}$ 

" 3-1: Isothermal to state 1

>>  $R = 8.314 \text{ J K}^{-1} \text{ mol}^{-1}$ FIND

(a) p-V diagram

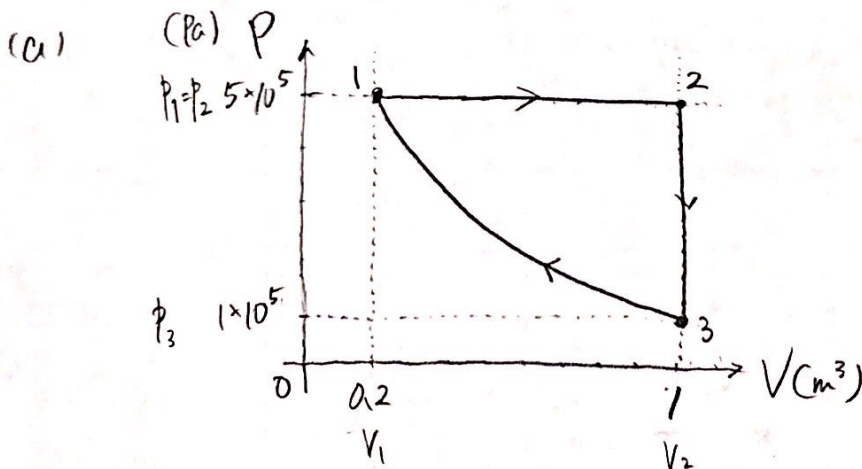
(b) work  $\equiv W$  for each process (kJ)EQUATION

$$\Delta U = Q - W$$

$$PV = nRT$$

ASSUMPTION

- ideal gas
- steady state
- quasi equilibrium
- closed system

SOLNFFD