Subiectul B. ELEMENTE DE TERMODINAMICĂ

III.a.	$p_0V_0 = \nu RT_3$ $U_3 = \upsilon C_V T_3$ Rezultat final: $U_3 = 22437$ J
b.	$C_p = C_V + R = \frac{5}{2}R$ $Q_{31} = \nu C_p(T_1 - T_3) = -\frac{5}{2}\nu RT_0$ Rezultat final: $Q_{31} = -18\,697{,}5$ J
c.	$Q_{12} = \Delta U_{12} + L_{12}$ $2p_0\,2V_0 = \nu RT_2 \Rightarrow T_2 = 4T_0$ $\Delta U_{12} = \nu C_V(T_2 - T_1) = \frac{9}{2}\nu RT_0$ $L_{12} = \frac{(2V_0 - V_0)(2p_0 + p_0)}{2}$ $Q_{12} = 6\nu RT_0$ Rezultat final: $Q_{12} = 44\,874$ J
d.	$\frac{p_0}{V_0} = \frac{p_2}{2V_0} \Rightarrow p_2 = 2p_0$ $L = \frac{(2V_0 - V_0)\cdot(2p_0 - p_0)}{2}$ Rezultat final: $L = 3\,739{,}5$ J