Subiectul B. ELEMENTE DE TERMODINAMICĂ

III.a.	$\dfrac{V_1^{\,2}}{T_1} = \dfrac{V_2^{\,2}}{T_2}$ $U_2 = \nu C_V T_2$ Rezultat final: $U_2 = 14958\ \text{J}$
b.	$L = \dfrac{1}{2}(V_2 - V_1)(p_2 - p_1)$ $L = \dfrac{1}{2}p_1 V_1 = \dfrac{1}{2}\nu R T_1$ Rezultat final: $L = 1246,5\ \text{J}$
c.	$Q_{31} = \nu C_p (T_1 - T_3)$ $T_3 = T_1 \dfrac{V_2}{V_1} = 600\ \text{K}$ Rezultat final: $Q_{31} = -6232,5\ \text{J}$
d.	$Q_{12} = \Delta U_{12} + L_{12}$ $\Delta U_{12} = \nu C_V (T_2 - T_1)$ $L = \dfrac{(p_1 + p_2)(V_2 - V_1)}{2}$ $Q = \nu C(T_2 - T_1)$ $C = C_V + \dfrac{R}{2}$ Rezultat final: $C_V = 16,62\ \text{J/mol·K}$