

**Subiectul B. ELEMENTE DE TERMODINAMICĂ**

<b>III. a.</b>	$\frac{p_1}{p_2} = \frac{V_1}{V_2}$ $p_2 = 2,5 \cdot 10^5 \text{ N/m}^2; V_2 = 5 \text{ l}; T_2 = 1875 \text{ K}$ $U_2 = \nu C_V T_2$ <p>Rezultat final: <math>U_2 = 3125 \text{ J}</math></p>
<b>b.</b>	$L_{1-2} = \frac{(p_1 + p_2)(V_2 - V_1)}{2}$ <p>Rezultat final: <math>L_{1-2} = 525 \text{ J}</math></p>
<b>c.</b>	$p_2 V_2 = p_3 V_3$ $Q_{2-3} = \nu R T_2 \ln \frac{V_2}{V_1} = p_2 V_2 \ln \frac{p_1}{p_2}$ <p>Rezultat final: <math>Q_{2-3} = 1150 \text{ J}</math></p>
<b>d.</b>	$\Delta U_{3-4} = \nu C_V (T_1 - T_2) = \frac{5}{2} p_1 V_1 \left(1 - \frac{T_2}{T_1}\right)$ <p>Rezultat final <math>\Delta U_{3-4} = -2625 \text{ J}</math></p>