

Clase 21 8 Septiembre 2015

Título de la nota

08/09/2015

Secuencias

Termodinámicas

2 o más procesos que no regresan al origen

$$\Delta S_{\text{sec}}$$

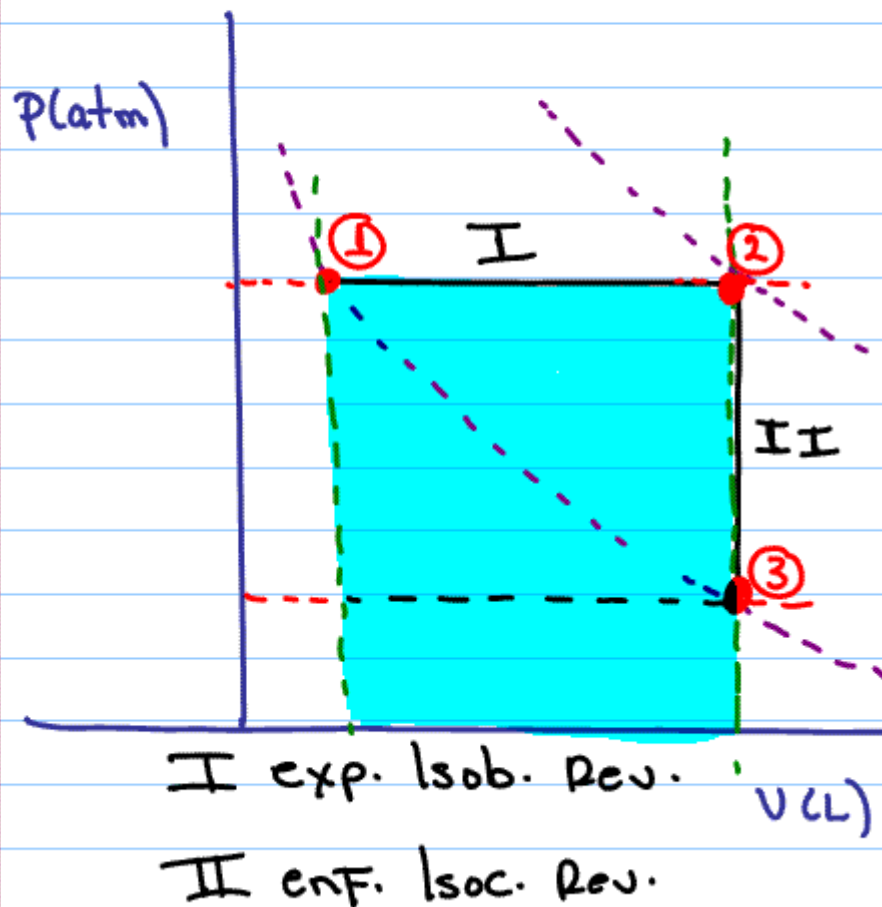
$$\Delta H_{\text{sec}} \neq 0$$

$$\Delta U_{\text{sec}}$$

$$q_{\text{sec}} \neq 0$$

$$w_{\text{sec}}$$

Propuesta 1



$$P_1 = P_2 > P_3$$

$$V_1 < V_2 = V_3$$

$$T_1 = T_3 < T_2$$

$$W_{\text{sec}} = W_{\text{I}} + W_{\text{II}}$$
$$= \oplus + \ominus$$

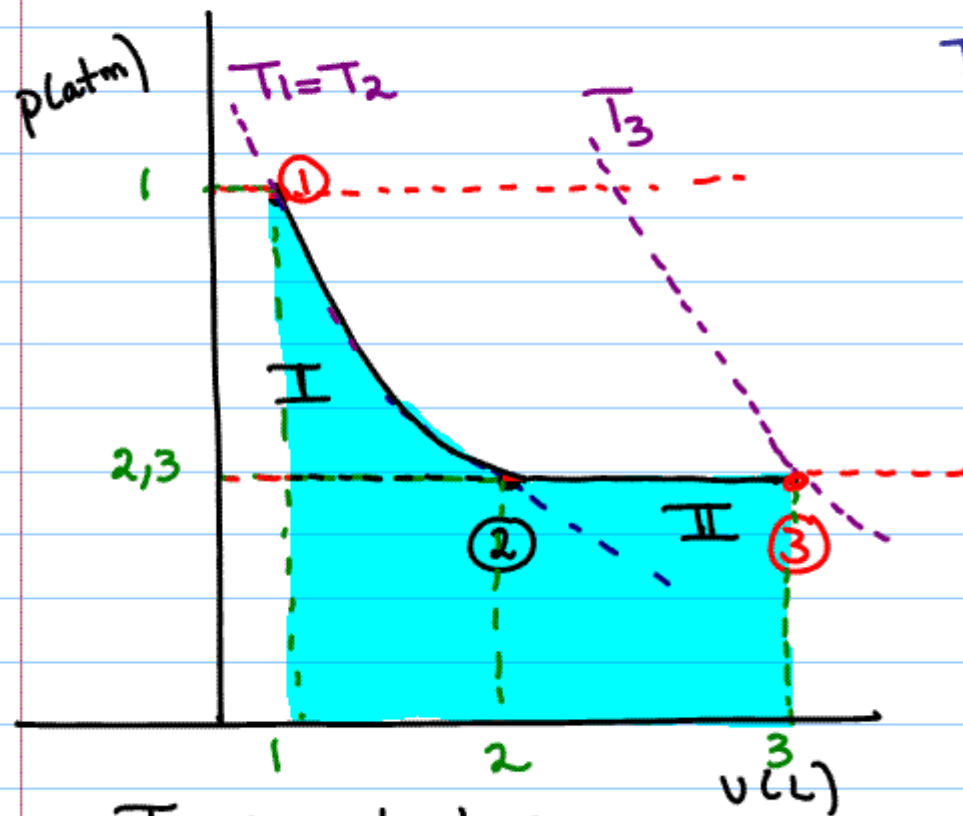
$$W_{\text{sec}} = + \text{ favorable}$$

$$\Delta S_{\text{sec}} = \Delta S_{\text{I}} + \Delta S_{\text{II}}$$
$$= \oplus + \ominus$$

Sera Favorable porque

ΔS_{I} es mayor

propuesta 2



I Exp. Isot. Rev.
 II Exp. Isob. Rev.

$$p_1 > p_2 = p_3$$

$$v_1 < v_2 < v_3$$

$$T_1 = T_2 < T_3$$

$$\begin{aligned} W_{\text{sec}} &= W_{\text{I}} + W_{\text{II}} \\ &= \oplus + \oplus \\ &= \oplus \text{ Favorable} \end{aligned}$$

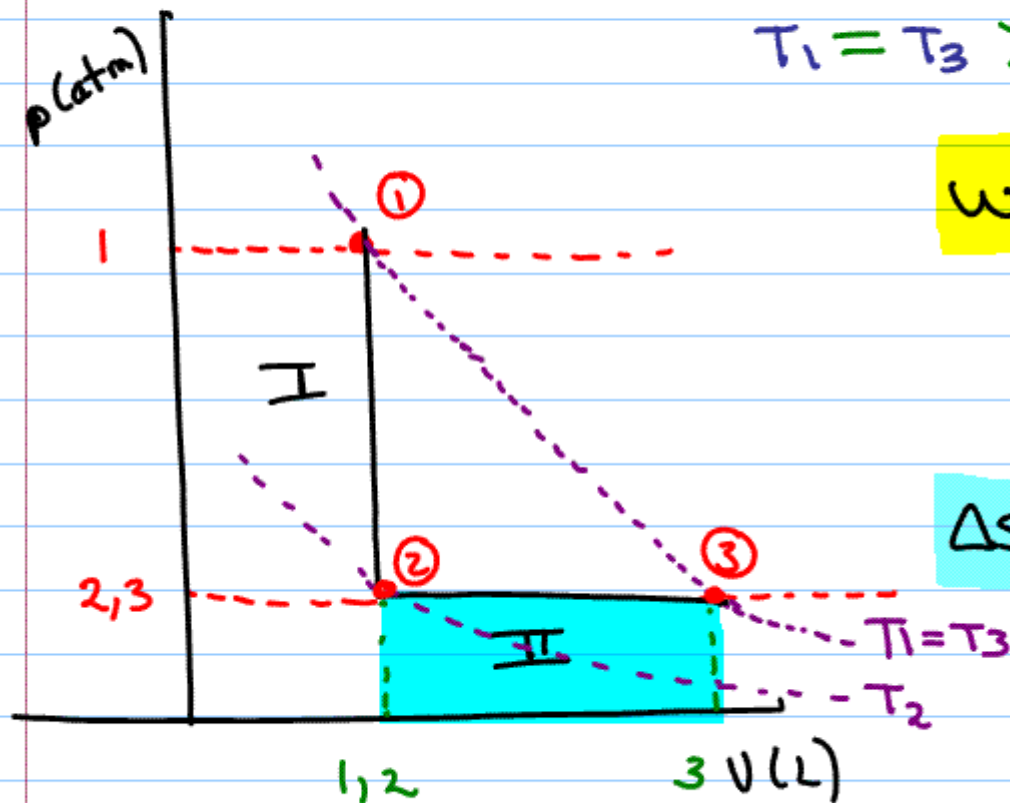
$$\begin{aligned} \Delta S_{\text{sec}} &= \Delta S_{\text{I}} + \Delta S_{\text{II}} \\ &= \oplus + \oplus \\ &= \oplus \text{ Favorable} \end{aligned}$$

Propuesta 3

$$P_1 < P_2 = P_3$$

$$V_1 = V_2 < V_3$$

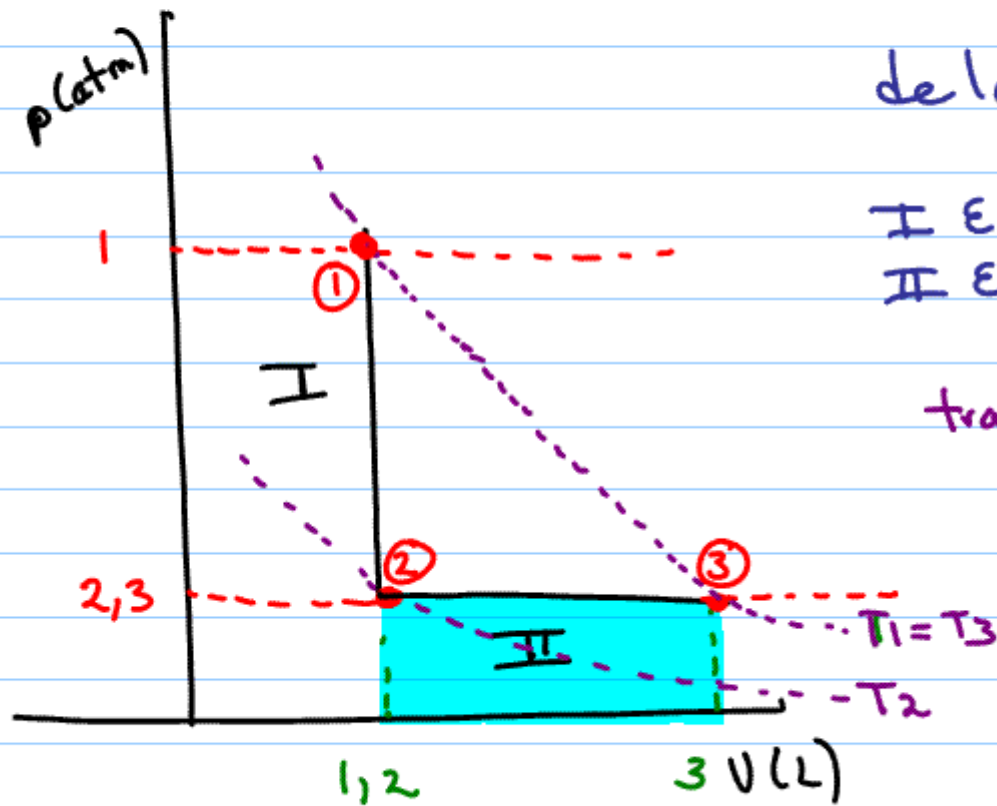
$$T_1 = T_3 > T_2$$



$$\begin{aligned}
 W_{\text{sec}} &= W_{\text{I}} + W_{\text{II}} \\
 &= \textcircled{0} + \textcircled{+} \\
 &= \textcircled{+} \text{ favorable}
 \end{aligned}$$

$$\begin{aligned}
 \Delta S_{\text{sec}} &= \Delta S_{\text{I}} + \Delta S_{\text{II}} \\
 &= \ominus + \oplus \\
 &= \oplus \text{ favorable}
 \end{aligned}$$

Propuesta 3



de la propuesta 3 checar si

I Enf. Isoc. Rev. } = Exp. Isot. Irrev.
II Exp. Isob. Rev.

tratar los cálculos como gas perfecto

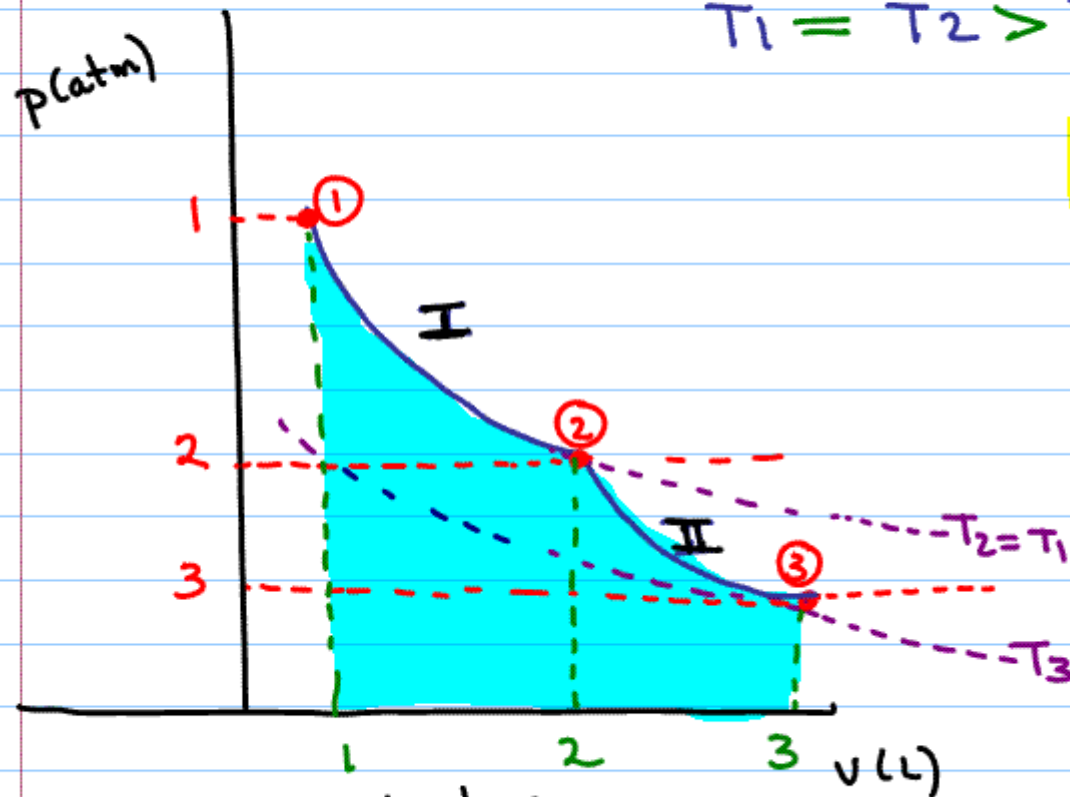
grupo 1203 ✓

Propuesta 4

$$p_1 > p_2 > p_3$$

$$V_1 < V_2 < V_3$$

$$T_1 = T_2 > T_3$$



I Exp. Isot. Rev.

II Exp. Adiab. Rev.

$$\begin{aligned} W_{\text{sec}} &= W_{\text{I}} + W_{\text{II}} \\ &= (+) + (+) \\ &= + \text{Favorable} \end{aligned}$$

$$\begin{aligned} \Delta S_{\text{sec}} &= \Delta S_{\text{I}} + \Delta S_{\text{II}} \\ &= (+) + (0) \\ &= (+) \text{Favorable} \end{aligned}$$

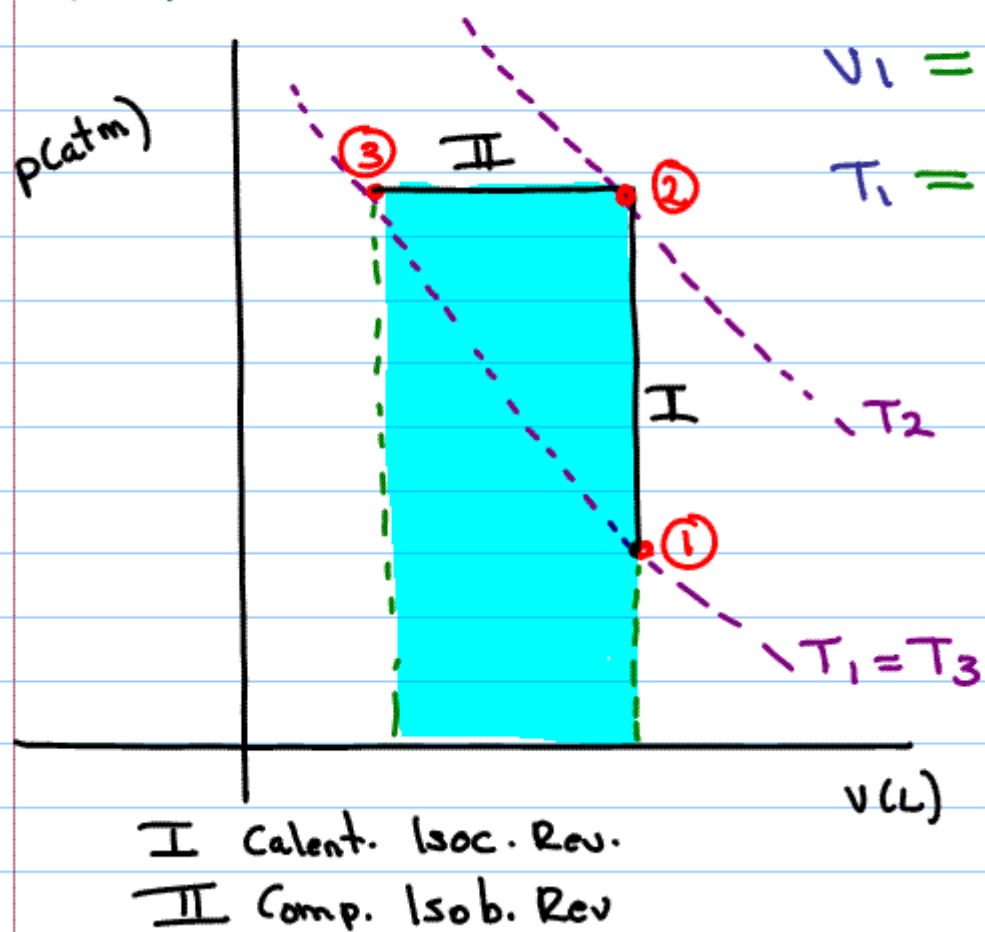
De cada propuesta

elegir 1 y la propuesta 3

Calcular ΔH , ΔU , ΔS , q , w

Dibujar los gráficos complementarios T vs V , T vs p y T vs S

propuesta 5



$$p_1 < p_2 = p_3$$

$$v_1 = v_2 > v_3$$

$$T_1 = T_3 < T_2$$

$$\begin{aligned}
 W_{\text{sec}} &= W_{\text{I}} + W_{\text{II}} \\
 &= \ominus + \ominus \\
 &= \ominus \text{ no favorable}
 \end{aligned}$$

$$\begin{aligned}
 \Delta S_{\text{sec}} &= \Delta S_{\text{I}} + \Delta S_{\text{II}} \\
 &= \oplus + \ominus \\
 &= \ominus \text{ no favorable}
 \end{aligned}$$