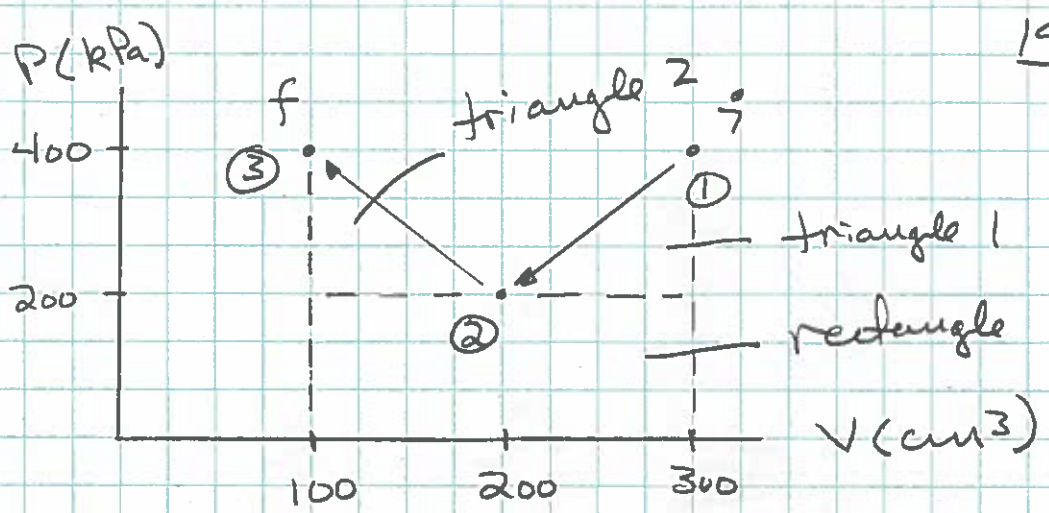

$$W_{i\to f} = -\int_{V_i}^{V_f} P\,dV = -\{\text{area under } PV \text{ curve}\}$$

$$= -\{-(\text{area of triangle 1} + \text{area of triangle 2} + \text{area of rectangle})\}$$

because $V_f < V_i$ for each.

$$= \left\{\frac{1}{2}(V_1-V_2)(P_1-P_2) + \frac{1}{2}(V_2-V_3)(P_3-P_2) + P_2(V_1-V_3)\right\}$$

Convert to MKS:

$P_1 = 400\times10^3\,Pa$ $\quad V_1 = 300\times10^{-6}\,m^3$

$P_2 = 200\times10^3\,Pa$ $\quad V_2 = 200\times10^{-6}\,m^3$

$P_3 = 400\times10^3\,Pa$ $\quad V_3 = 100\times10^{-6}\,m^3$

So:

$$W_{i\to f} = 60\ J$$