

8. For a constant pressure process the work done is calculated as the product of the pressure times the change in volume.

$$W = P \Delta V$$

$$W = P (V_2 - V_1)$$

$$W = (1500 \text{ N / m}^2) (5.0 - 2.0)\text{m}^3$$

$$W = (1500) (3.0) \text{ N m} = 4500 \text{ J}$$

This is a positive quantity, so work was done by the system when the gas expanded.