

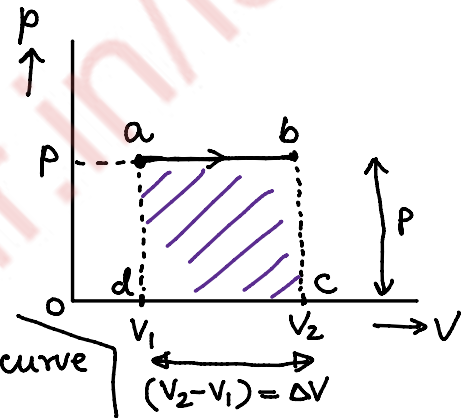
(a) When $p = \text{constant}$:

Work done

$$\Delta W = p \cdot \Delta V$$

$$= (ad) \cdot (dc)$$

$$= \text{area under } p\text{-}V \text{ curve}$$



When $p = \text{const}$, area under p - V curve represents the work done in the process.

* If the graph moves to the right ($V_2 > V_1$) then work is +ive $\Rightarrow$ work is done by the system.

* If the graph moves from right to left ($V_2 < V_1$) then work is -ive $\Rightarrow$ work is done on the system.