

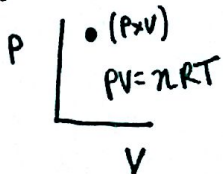
CHANGE INTERNAL ENERGY

$$\Delta U$$



1)  $\Delta$ TEMP

2) PV GRAPH



3) CYCLIC PROCESSES

$$\Delta U = 0$$

4) ISOTHERMAL CURVE

$$\Delta U = 0$$

5) IS  $\Delta U$   $\pm$  or  $-$

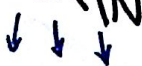
$$\Delta U = U_f - U_i$$

$$U = \frac{3}{2} nRT$$

$$\Delta U = \frac{3}{2} nR\Delta T$$

ADDS OR TAKES HEAT

$$Q$$



1) ADIABATIC

$$Q = 0$$

2) IS  $Q$   $\pm$  or  $-$

DOES WORK?  
OR ARE WE DOING WORK?

$$-W_{BY}$$

WHAT HAPPENS TO  
1) VOLUME!!!

2) AMOUNT OF WORK  
AREA

3) NETWORK  
 $\rightarrow$  AREA OF "BOX" OF  
CYCLE

4)  $W_{BY}$   $\pm$  or  $-$  "WHO'S DOING WORK"

5) ISOCHORIC }  $\Delta V = 0$   
ISOCOLUMETRIC }  $W = 0$

$$W = P \cdot \Delta V$$

I SHOULD BE THINKING