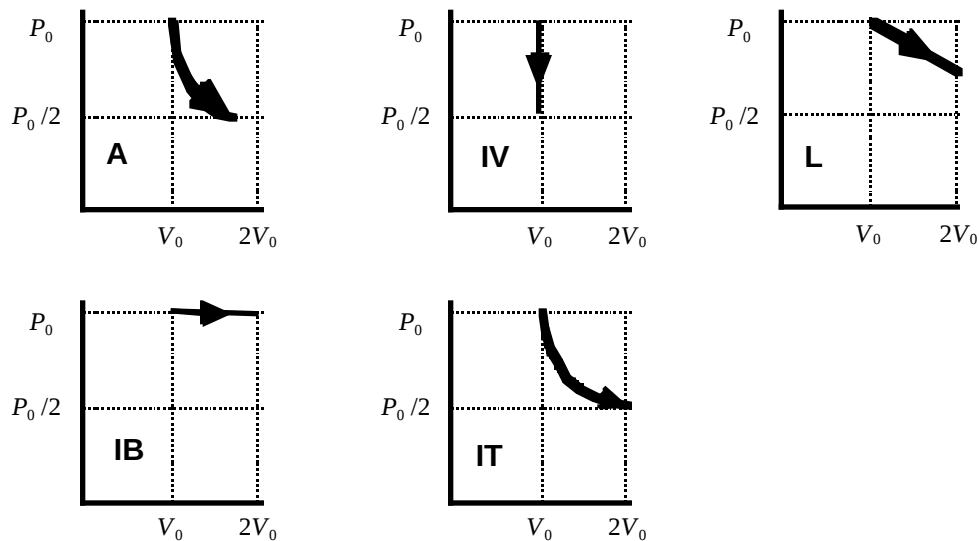


Various Thermodynamic Processes—Work Done by Gas ¹¹⁰

Five thermodynamic processes are illustrated below. All five processes are for the same ideal gas starting at the same initial pressure and temperature (P_0 and T_0). Each of the five distinctly different processes results in different final equilibrium states. The labels on each of the diagrams are to be interpreted as follows:

A = adiabatic L = linear IT = isothermal
 IV = isovolumetric IB = isobaric

Rank these processes from greatest to least on the basis of the amount of work that is done by the gas. Positive work should be ranked higher than negative work.



Greatest Work 1_____ 2_____ 3_____ 4_____ 5_____ Least Work

Or, all of the diagrammed processes require the same amount of work done by the gas. _____

Or, there is no work done by the gas in any of these processes. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed

Sure

Very Sure

1 2 3 4 5 6 7 8 9 10