Orient Yourself to the Physical System & the Graph: The plot shows various thermodynamic quantities for water vapor in a piston (cylindrical thermos with a movable top) at different states. From state (point) A to state (point) B, estimate the following quantities:

Verbal Description	**Symbol**	**Estimate (with Units)**
Change in volume:	$\Delta V_{A\to B}$	
Change in entropy:	$\Delta S_{A\to B}$	
Change in temperature:	$\Delta T_{A\to B}$	
Change in pressure:	$\Delta P_{A\to B}$	
Change in internal energy:	$\Delta U_{A\to B}$	

Under what circumstances would you be willing to label these quantities with 'd's instead of Δ's? For example, dV instead of ΔV.

Determine a Rate: Pick two of the variables in the table and determine the rate of change of one with respect to the other from A to B. What experiment could you do to measure this rate?

Inverting Your Rate: Determine the reciprocal of the rate you calculated. Brainstorm a meaningful name for this rate.

Reversing the Path: How does the rate you previously calculated change if instead you went from state B to state A?