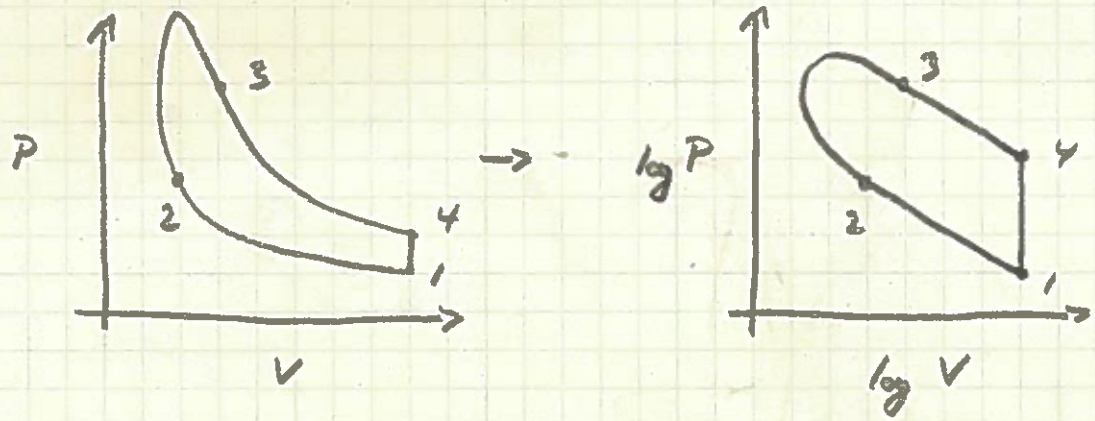
- plot from 180° (BDC) to 540° (BDC)



- 1 → 2 (180° → θ_s, 350°) isentropic compression

  $P_1 V_1^{\gamma}$ = constant, e.g. $P(180°)\,V(180°)^{\gamma} = K_1$ (2.44)

  $P(181°) = K_1 / V(181°)^{\gamma}$, etc.

- 2 → 3 (θ_s, 350° → θ_d, 390°) from P2 part e

  $P_{new} = P_{old} + \Delta P$

  $\Delta P = -\gamma \frac{P_{old}}{V_{old}} (V_{new} - V_{old}) + \frac{\gamma - 1}{V_{old}} Q_{in} (x_{b,new} - x_{b,old})$ (2.36)

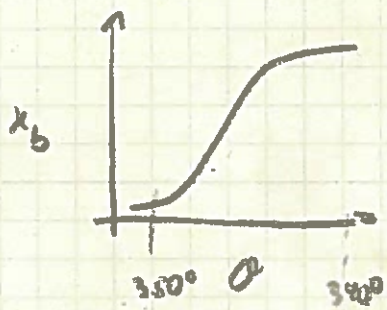
- 3 → 4 (θ_d, 390° → 539°) isentropic expansion

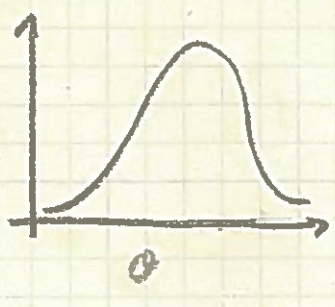
  $P_3 V_3^{\gamma}$ = constant, e.g. $P(390°)\,V(390°)^{\gamma} = K_2$ (2.44)

  $P(391°) = K_2 / V(391°)^{\gamma}$, etc.

- 4 → 1, drop P to P,

  e.g. P(539°) → P(540°)





θ, $V(\theta)$, $P(\theta)$, $x_b(\theta)$, $Q(\theta)$