

$$(8.36) \Rightarrow S = \frac{k}{m} \left\{ \frac{1}{\sigma-1} + \frac{1}{\sigma-1} \log \theta - \log \alpha - \log \rho \right\}$$

$$= \text{const.} + \frac{k}{m(\sigma-1)} \ln \theta - \frac{k}{m} \ln \rho$$

$$\text{da (8.35) } \theta = \frac{m}{k} \frac{p}{\rho} \Rightarrow \log \theta = \log \frac{m}{k} + \log p - \log \rho$$

$$S = \text{const.} + \frac{k}{m(\sigma-1)} \left[\log \frac{m}{k} + \log p - \log \rho \right] - \frac{k}{m} \ln \rho$$

$$= S_0 + c_v \log p + \frac{k}{m(\sigma-1)} \left(-1 - (\sigma-1) \right) \ln \rho$$

$$= S_0 + c_v \log p - c_v \gamma \ln \rho =$$

$$\boxed{S = S_0 + c_v \log \left(\frac{p}{\rho^\gamma} \right)} \quad (8.37)_2$$

done $c_v = \frac{k}{m(\sigma-1)}$ $\left(\begin{array}{l} \frac{k}{m} = c_p - c_v \\ \gamma = \frac{c_p}{c_v} \Rightarrow c_p = \gamma c_v \\ \frac{k}{m} = (\sigma-1) c_v \end{array} \right)$