Summary : Ensembles

Ensemble	Macros tate	Probability dishibution	Thermodynamics
Microcanonical	E, V, N	Ps = I T(Es)	S(E, V, N) = klog(T)
Canonical	T, V, N	Ps = e-BEs QN	$A(T,V,N)=-2TlogQ_N$
Srand canonial	TiVin	Ps = e-B(E5-1M)	PV = leT log 2

Ps: probability for the system to be in microstates

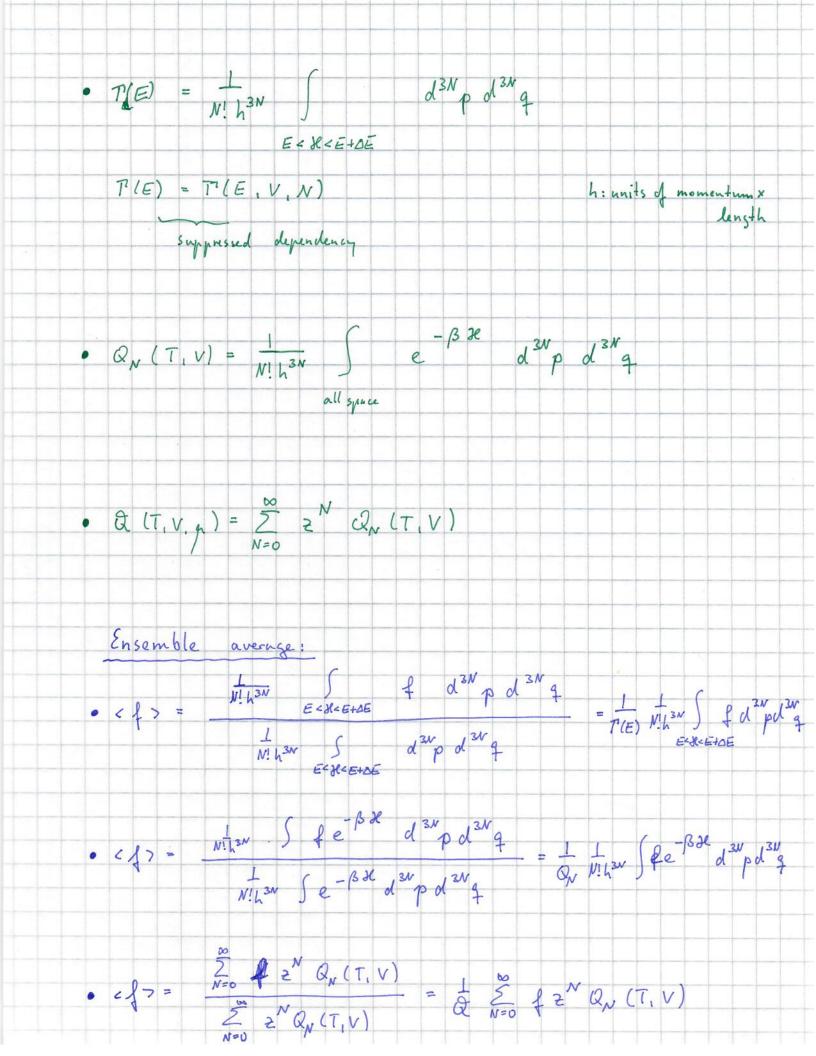
Eg: energy of system in micro states

S: entropy

A: Helmholt free energy

P: Pressure

B = I



THE T(E) can be rewritten in a convenient way using the Heavy side step function: T(E) = Z(E+DE) - Z(E) = 1 3N \ \ \tau \ \(\varepsilon + DE - H(\varphi, \varphi) \) d 3N p d 3N q - I av S & E - H (p, F)) d2V p d3V q