

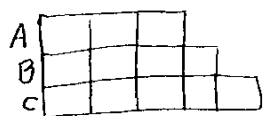
Course 565/665 Lecturer Prof. Cavagnero
 Day 2.5.04 Date 9:55 am
 Notes Taken By Jiang Hong Total Number of Pages

W_{max} why do glasses expand?

Model systems: simplified models of reality.
 e.g. lattice model.

Distill essential features of a complex system.

space: 1 D model.



M: # of sites in 1D lattice model.

N=3 — gas particles.

$$M_A = 3$$

$$M_B = 4$$

$$M_C = 5$$

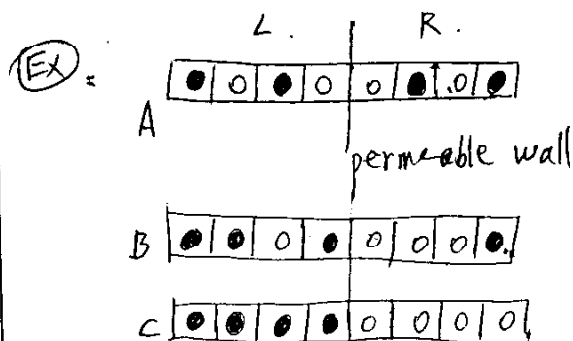
fill the spaces w/ 3 particles:

$$W_A = \frac{3!}{3!} = 1$$

$$W_B = \frac{4!}{3!1!} = 4$$

$$W_C = \frac{5!}{3!2!} = 10$$

The 3 gas particles prefer to occupy a larger volume.



all states are equally probable.

156 of 3