## Phy 410 Quiz #6, March 6, 2009



*S1 S2* 

(i) The temperature of  $\mathcal{S}$  is  $\tau_1$  and that of  $\mathcal{S}$ 2 is  $\tau_2$  and  $\tau_1 > \tau_2$ . Which direction the energy flows?

## From 1 to 2

(ii) Two systems are at the same temperature but can now exchange particles. If  $\mu_2 > \mu_1$ , which directions the particles flow?

## From 2 to 1

(iii) The two systems are at the same temperature.  $N_1 >> N_2$  but  $\mu_1 < \mu_2$ . Which directions the particles flow?

## From 2 to 1