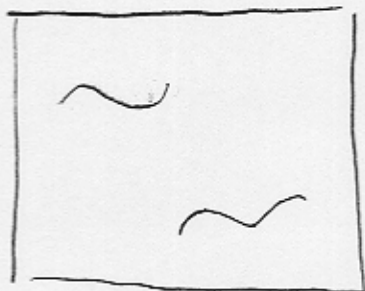


Last Time :



Spacing Between Particles :

$$d \sim \left(\frac{V}{N} \right)^{\frac{1}{3}}$$

Thermal Wavelength :

$$\lambda_{\text{thermal}} \sim \frac{h}{mv} \sim \frac{h}{m \left(\frac{k_B T}{m} \right)^{\frac{1}{2}}} \sim \frac{h}{\sqrt{m k_B T}}$$

To treat particles classically need

$$\lambda_{\text{thermal}} \ll d$$