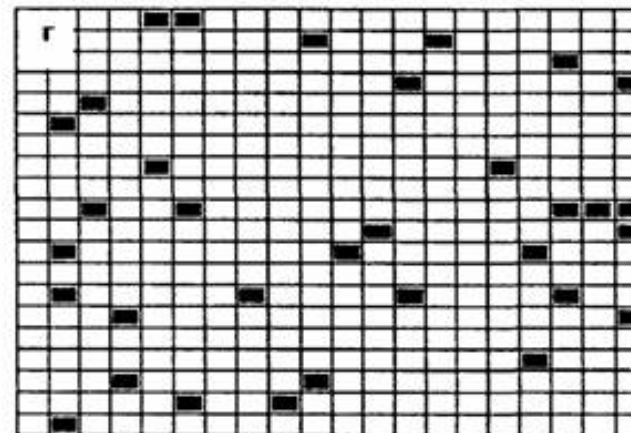
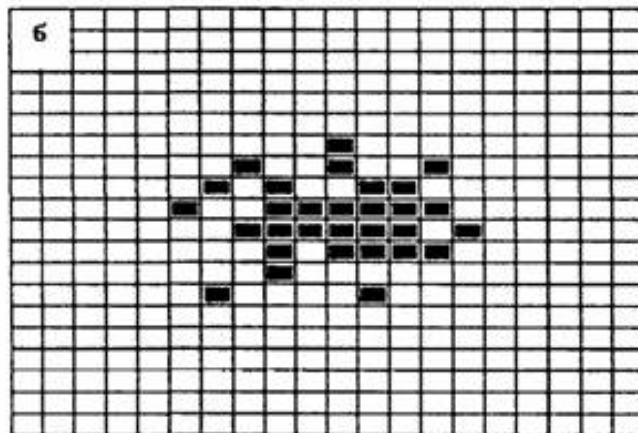
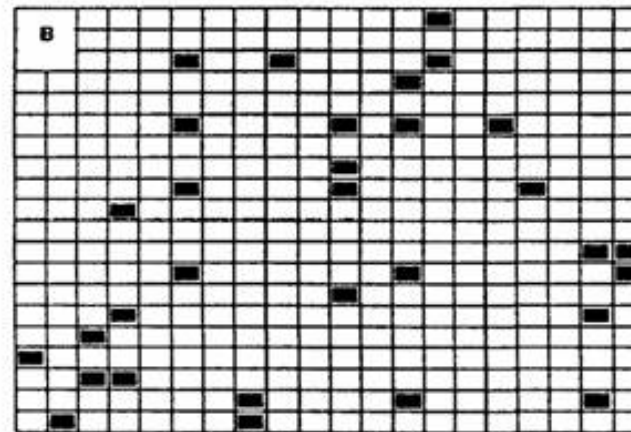
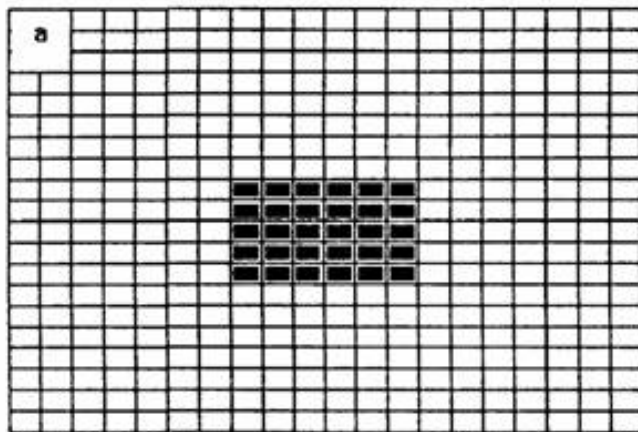


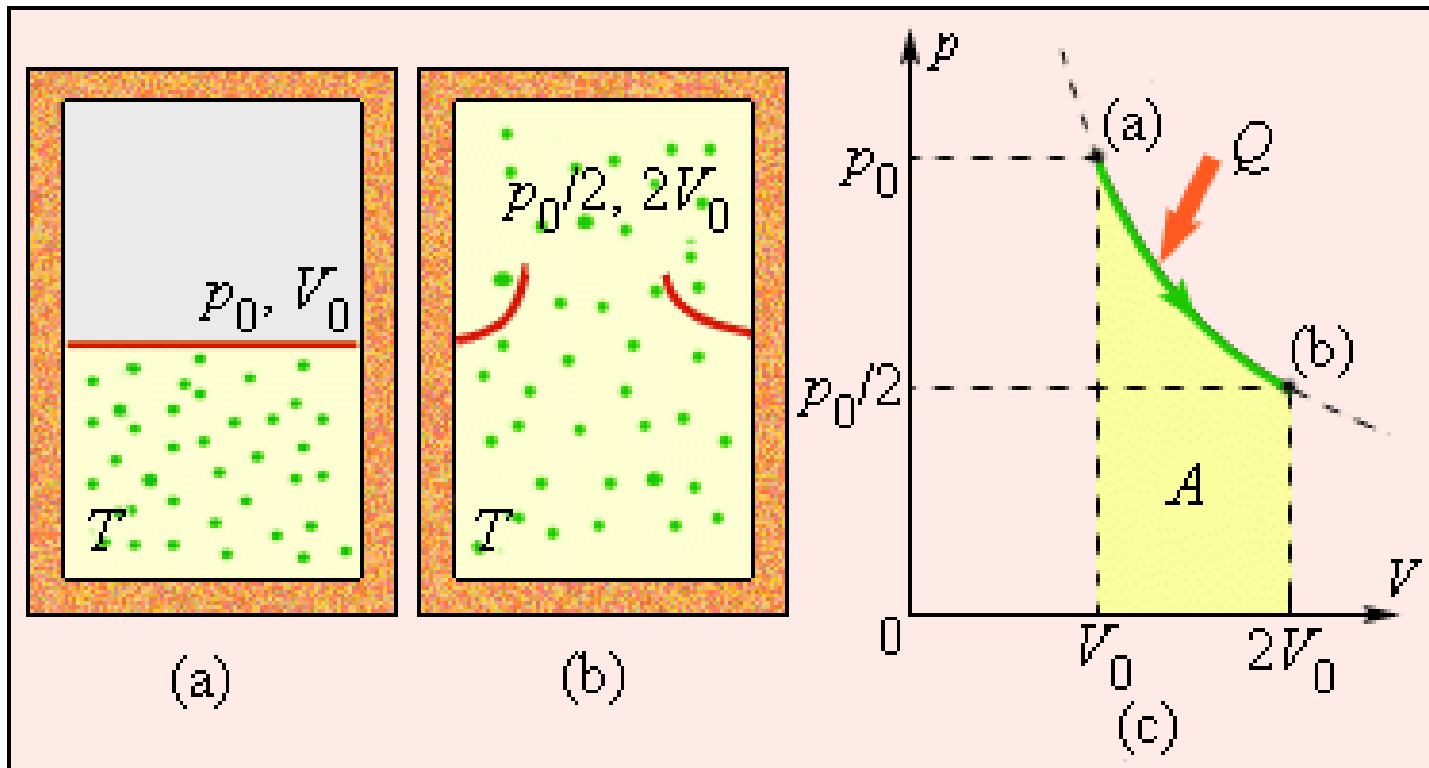
Лекция 10

- Энтропия. Термодинамическое определение.
- Свойства энтропии.
- Энтропия и второе начало термодинамики.
- Изменение энтропии.
- Энтропия и цикл Карно.
- Статистическая трактовка энтропии.
- Формула Больцмана.
- Термодинамические потенциалы.

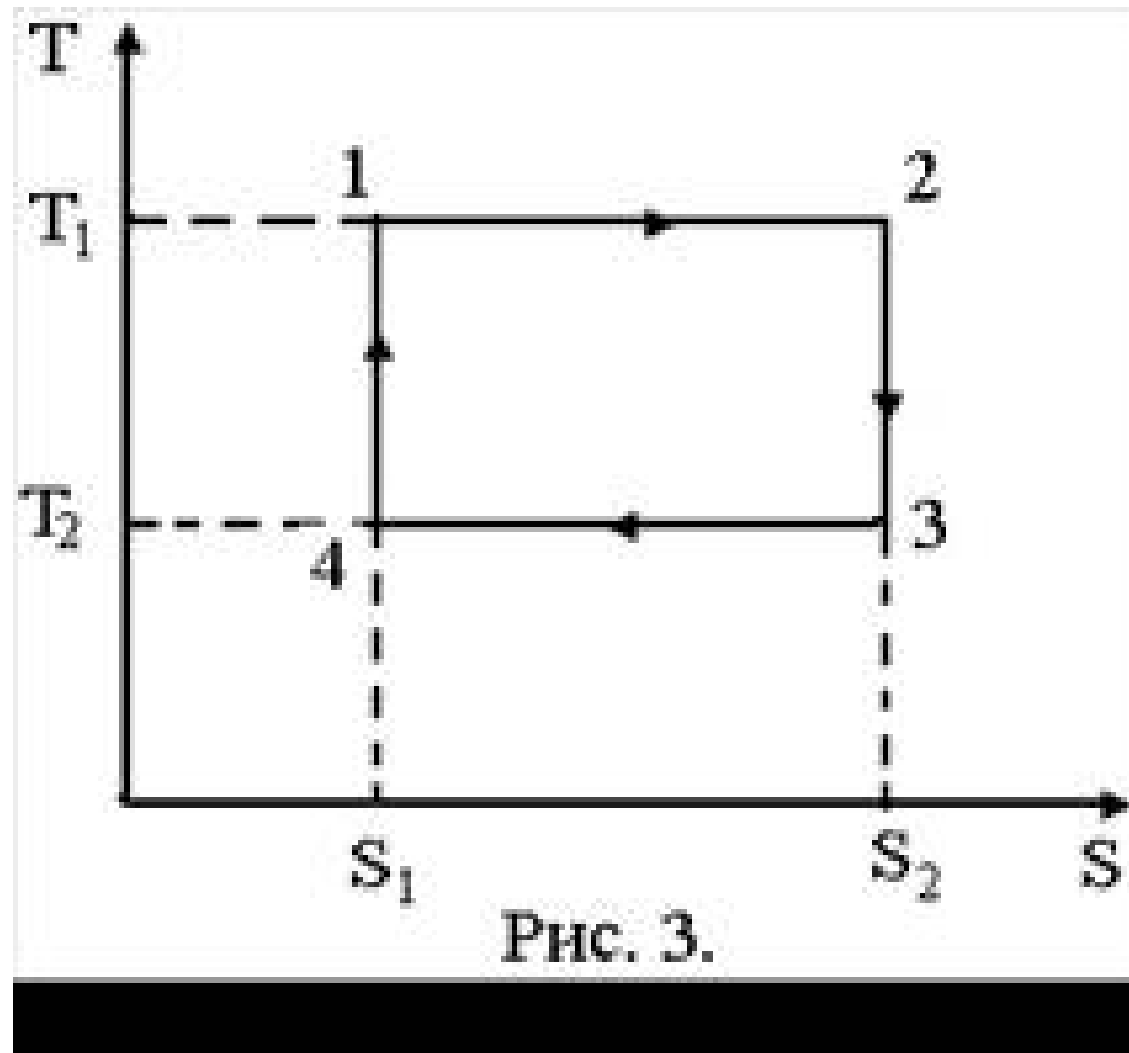
Энтропия и упорядоченность СИСТЕМЫ



Энтропия и необратимость процесса



Цикл Карно



Формула Больцмана

$$S = k \cdot \log W$$

Термодинамические потенциалы

Thermodynamic potentials are useful for the description of non-cyclic processes.

+PV

They are used along with the **First Law of Thermodynamics**.

System work and **entropy** play a major role.

-TS

<p>U Internal energy U = energy needed to create a system</p>	<p>F = U-TS Helmholtz free energy F = energy needed to create a system minus the energy you can get from the environment.</p>
<p>H = U+PV Enthalpy H = energy needed to create a system plus the work needed to make room for it</p>	<p>G = U+PV-TS Gibbs free energy G = total energy needed to create a system and make room for it minus the energy you can get from the environment.</p>