

Topics for Thermodynamics Test

First Law of Thermodynamics: $Q = \Delta U + W$

Internal Energy: $U = 3/2nRT$

Entropy change: $\Delta S = \Delta Q/T$

Equation for monatomic gases undergoing adiabatic change $p_1V_1^{5/3} = p_2V_2^{5/3}$

$W = p\Delta V$

η = useful work done / energy input

$\eta_{\text{carnot}} = 1 - T_C/T_H$

Isobaric changes

Isothermal changes

Adiabatic changes

Isovolumetric changes

Heat engines

Heat pumps/refrigerators

2nd law of thermodynamics

Carnot cycles

Previous concepts may also be covered