

1.S: The Basics (Summary)

Learning Objectives

Upon mastering the material covered in this chapter, one should be able to do the following:

1. Write down expressions from which work of motion and of expansion can be calculated.
2. Express the “Zeroth Law of Thermodynamics.
3. Convert between temperatures on several scales that are commonly used.
4. Define boundaries that differentiate between a system and its surroundings.
5. Perform calculations involving Specific Heat and understand how the specific heat governs temperature changes for the flow of a given amount of energy.

Vocabulary and Concepts

- calorie (cal)
- Calorie (Cal)
- closed system
- energy
- equation of state
- extensive
- heterogeneous
- homogeneous
- Ideal Gas Law
- ideal gas law constant
- intensive
- isolated system
- joule
- kinetic energy
- limiting ideal behavior
- open system
- platinum resistance thermometer
- potential energy
- pressure
- reversible expansion
- specific heat
- state variables
- surroundings
- system
- temperature
- universe
- work

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