Kinetic Theory of Gases II

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Definitions:

First Law of Thermodynamics-

Isothermal-

Adiabatic-

Second Law of Thermodynamics-

Macroscopic States-

Microscopic States-

Degradation of Energy-

What is the formula for the first law of thermodynamics?

What is entropy and what is the formula for it?

Can heat flow from a cooler object to a hotter object? If so, how?

Math:

1. Find the change in entropy of a 2 kg block of ice that melts completely while remaining at the melting temperature of 0 degrees C.
2. Find the change of entropy of a 2 kg puddle of water that freezes completely while remaining at 0 degrees C.

Heat of transformation of water is 3.335 x 10^5 J/kg