Kinetic Theory of Gases

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

Definitions:

Kinetic Theory of Gases-

Ideal Gas-

Root-mean square value-

Boltzmann’s Constant-

Thermodynamics-

Statistical Mechanics-

State Variables-

Charles’ Law-

Boyle’s Law-

Temperature Reservoir-

What are the assumptions made in the Kinetic Theory of Gases?

What are the consequences of these assumptions?

What is the equation for the ideal gas law?

Math:

The wall thermometer in the kitchen of a seaside restaurant reads 23 degrees C. An absent-minded chef clamps the top of a pressure cooker shut and turns on the burner. What is the pressure within the pressure cooker when the air inside reaches 90 degrees C?