

Theoretical Physics
Prof. Ruiz, UNC Asheville
Chapter H Homework. Statistical Mechanics

A total 25 minutes video homework assignment.

HW-H1. The Pascal Triangle. There is a nice relationship among the binomial expansion $(a + b)^n$ and factorials. For homework, watch this 7 minute video <https://youtu.be/ggcqjjEX80I> on your honor and you have completed this assignment. There is nothing to turn in.

HW-H2. Undetermined Multipliers. This trick in doing a max-min problem is very nice to know in addition to the usual max-min method you learn in Calculus I. For homework, watch this 5 minute video <https://youtu.be/5s5PgHX9QH0> on your honor and you have completed this assignment. There is nothing to turn in.

HW-H3. Evaluating the Undetermined Multipliers α and β . Pascal's Law, a nice law to know on its own merit, comes in handy here with our statistical mechanics. Pascal's Law is also very important in Atmospheric Science in studying the atmosphere. For homework, watch this 8 minute video https://youtu.be/VO5VX1qr_tc on your honor and you have completed this assignment. There is nothing to turn in.

HW-H4. The Laws of Thermodynamics. The two laws of thermodynamics are very important in physics, chemistry, engineering, and other sciences. Watch this roughly 3-minute video <https://youtu.be/Zt6l6VexA6Y> on your honor and you have completed this assignment. There is nothing to turn in.