# Exercises in Statistical Mechanics

Based on course by Doron Cohen, has to be proofed

*Department of Physics, Ben-Gurion University, Beer-Sheva 84105, Israel*

This exercises pool is intended for a graduate course in "statistical mechanics". Some of the problems are original, while other were assembled from various undocumented sources. In particular some problems originate from exams that were written by B. Horovitz (BGU), S. Fishman (Technion), and D. Cohen (BGU).

==== [Exercise 5955]

**Baruch's C01.**

The boiling point of a certain liquid is $95\,°C$ at the top of a mountain and $105\,°C$ at the bottom. Its latent heat is 1000 cal/mole. Calculate the height of the mountain. (Assume that the gas phase is an ideal gas with density much lower than that of the liquid; use the average mass of 30 gr/mole.) The air is at uniform temperature of 27C.