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Physics 404   **HOMEWORK ASSIGNMENT #4**   **Spring 2007**

Due date: Thursday, Feb. 22   **Deadline:** Tuesday, Feb. 27

S means a problem in Schroeder's text; GT means a problem in Gould & Tobochnik.

1. S 3.14

2. S 3.23

3. S 3.24 Warning: when doing the case N=5000, you will probably not be able to go beyond q =160 or so. This will not hinder you in finding the low-temperature behavior of the specific heat, which is the point of the problem.

4. S 3.25 (except f)

5. S 3.34 (except g)

Problems 3, 4, 5 count as double problems (worth 20 points each).