Directions. Please work on the problems below. Your solutions must begin with a clear statement of the problem, followed by a clear, legible solution (or partial progress towards a solution). Please refer to the syllabus for the policy on grading and late homework.

Collaboration. I encourage you to discuss the homework problems with your classmates. However, each student must submit his or her own homework solutions.

1. Please solve exercises # 8, 18, 28, and 50 in section 12.2.

2. Please solve exercise # 16 in section 12.3

3. What is the average height of a point which lies in the solid pyramid with square base having corners $(1,0,0)$, $(0,1,0)$, $(-1,0,0)$, and $(0,-1,0)$ and having the point $(0,0,1)$ as its summit?