

Spring, 2008

**MATH 4250/6250**  
**PROBLEM SET #7**

T. Shifrin

DUE April 1, 2008.

**Instructions:** Turn in (at least) five problems of your choice, but **including any underlined problem(s)**. Graduate students should include at least one “pyramid” problem.

*Problems to work but not hand in:* #2.4.1, 2.4.2, 2.4.4, 2.4.8.



#2.4.6, 2.4.7, 2.4.9, 2.4.11.



#2.4.10, 2.4.12, 2.4.13, 2.4.15, 2.4.18.



#2.4.19 **and** either 2.4.20 or 2.4.21.

Required for 4220/6220 graduates: #2.4.22. This problem arose when one of my multivariable calculus students years ago asked a wonderful question: When you follow the route of steepest ascent to the top of a mountain, are you taking the shortest route (i.e., a geodesic)?