Use the following list of questions as a guide in your review of material of Math 10A:

- The exam is on Saturday, 12/13, 3:00 pm – 6:00 pm.
- In the exam, you have to show every step of your calculation.
- A cheating will cause a serious consequence even for your whole life.

1. What is partial derivative?
2. What is a continuous function?
3. What is the inner product? What is the length of a vector?
4. What is a differentiable function?
5. What is a tangent plane?
6. What is a derivative matrix?
7. What is chain rule?
8. What are gradients and directional derivatives?
9. What is an implicit function?
10. What are second order partial derivatives?
11. What is a Taylor series?
12. What is a maxima and minima? What is a critical point?
13. What is a $2 \times 2$ determinant?
14. What is the second derivative test?
15. What is a constrained extrema?
16. What is the Lagrange multiplier? What is a constrained critical point?
17. What is acceleration?
18. What is a $3 \times 3$ determinant? What is the cross product?
19. What is the arc length of a curve??
20. What is a vector field?
21. What is the divergence?
22. What is the curl?
23. What is the Laplace?

Review Problems:
§2.2: 19, 20, 21, 25, 26, 31, 33, 34. §2.3: 2, 4, 6, 8, 13, 15, 18, 20. §2.4: 10, 12, 14, 16, 18. §2.5: 2, 4, 6, 8, 18, 20, 22, 24, 30, 32, 34, 36. §2.6: 2, 4, 6, 8, 10, 12. §3.1: 1, 3. §3.2: 1, 3, 5. §3.3: 2, 4, 6, 8. §3.4: 2, 4, 6, 8, 10, 12, 14, 16, 18. §3.5: 2, 4, 6, 8, 10, 12. §4.1: 2, 4, 6, 8. §4.2: 2, 4, 6. §4.3: 14, 16. §4.4: 2, 4, 14, 16, 25.