Review For Test 3

For each section below review class examples, homework and quizzes. Use examples in the book to supplement class notes.

1. Section 13.6. Directional derivative, gradient, applications of gradient. Review problems: 21, 23, 29, 35, 53, 65 on pp. 924-926.

2. Section 13.7. Tangent plane: equation of the tangent plane in two forms (see class notes). Review problems: 13, 17, 41, 47, on pp. 933-934.

3. Section 13.8. Extrema of functions of two variables: Extreme Value Theorem, finding and analyzing critical points, Second Partial Derivatives test, finding absolute extrema. Review problems: 5, 11, 28, 27, 45, 47 on pp. 942-943.

4. Section 14.1. Iterated integrals and area in the plane. Practice problems: #25, 33, 37, 41, 45, 47, 55, 57, 59, 65, 69, 71 on pp. 972-973.

5. Section 14.2. Double integrals and volume. Practice problems: #15, 17, 21, 22, 23, 25, 27, 29, 35 on pp. 983-984.

6. Section 14.3. Change of variables: polar coordinates. Practice problems: #17, 19, 23, 27, 33, 37, 43 on pp. 991-992.

7. Section 14.5. Surface area. Practice problems: #3, 11, 15, 17 on p. 1007.

8. Section 14.6. Triple integrals. Practice problems: #3, 11, 13, 15, 17, 19, 23, 27, 31, 35 on p. 1017.

Good luck!