

## **Review For Final Exam (Calculus III, Fall 2016)**

Final Exam is cumulative: use review sheets for tests 1, 2, and 3 to review previous material. For each section below review class examples, homework and quizzes. Use examples in the book to supplement class notes.

1. Section 15.1. Vector fields, conservative vector fields. Tests for conservative vector field in two and three dimensions. Finding potential function. Gradient, curl, and divergence. Review problems: 8, 10, 35, 37, 43, 51, 53, 59, 61 on pp. 1049-1050.
2. Section 15.2. Line integral of a function. Line integral of a vector field. Review problems: 1, 4, 6, 11, 13, 17, 19, 29, 37, 39 on pp. 1061-1062.
3. Section 15.3. Conservative vector fields and independence of path. Review problems: 9, 11, 15, 17, 21, 27 on pp. 1072-1073.
4. Section 15.4. Green's theorem. Review problems: 1, 7, 11, 15, 23, 25 on pp. 1081-1082.
5. Section 15.6. Surface integrals. Review problems: # 1, 5, 11, 17, 19 on p. 1104.

**Good luck!**