

REVIEW FOR 136.275 TEST 2, February 28, 05

Chapters 13 (13.3 – 13.5), 14 (14.1 – 14.8) and 15 (15.1) from Anton

DEFINITIONS (formulas for):

13. arc length, arc length parametrization, unit tangent, normal and binormal vectors, curvature, radius of curvature.
14. level curves and level surfaces, general limits and limits along a curve, continuity, partial derivatives, differentiability, gradient vector, tangent plane, chain rules, directional derivatives, normal line, interior and boundary point, open, closed and bounded sets, critical points, local and absolute extremes.
15. double Riemann sum, double integrals, iterated integrals.

THEOREMS:

14. Relationships between general limits and limits along curves, equality of mixed partial derivatives, differentiability and continuity, first order partial derivatives and differentiability, directional derivatives and gradient, properties of the gradient, extreme value theorem, second partial derivatives test.
15. Fubini's Thm.(thm. on double integrals and iterated integrals), continuous functions are integrable over rectangles.