

Review 4 Math 261

Any term in **bold face** know the definition or statement of the Theorem well enough to state it on the test. The definition you give should be very similar to the one in the book or one with similar detail.

Section 16.1 vector field, conservative vector field, ∇f be able to draw vectors in a vector field in \mathbb{R}^2 Sample problems: 11,14,25

Section 16.2 line integral of \mathbf{F} along C , be able to compute line integrals, Sample problems: Example 2,4 Exercise 10, 19

Section 16.3 The fundamental Theorem of line integrals, path independent, know and be able to use Theorems 2,6. be able to find potential functions and compute line integrals with them. Sample problems: Example 4 Exercise 5,15

Section 16.4 Green's Theorem be able to use Green's thm in either direction Sample problems: Example 1,3 Exercise 7

Section 16.5 curl \mathbf{F} , $\text{div}(\mathbf{F})$, Theorem 4 vector form of Green's Theorem Sample problems: Example 3 Exercise 2,15

Section 16.6 parametric surface, surface Area, equation of tangent plane Sample problems: Example 11 Exercise 37

Section 16.7 Be able to apply equations 2,4,9,10 Sample problems: Example 2,5 Exercise 11,19

Section 16.8 Stokes Theorem Sample problems: Example 1,2, Exercise 9,13

Section 16.9 Divergence Theorem Sample problems: Example 1,2 Exercise 2,12