

MATH 249

Today

1. 16.9: The Divergence Theorem (Understand the Divergence Theorem as a generalization of the FTC.)
2. WeBWorK
3. Handouts [Integration summary, line integral flowchart, surface integral flowchart]

16.9: The Divergence Theorem

1. Let E be a simple solid region, and let S be the boundary surface of E with outward orientation. Let \vec{F} be a vector field whose components have continuous partial derivatives on an open region containing E . Then

$$\iint_S \vec{F} \cdot d\vec{S} = \iiint_E \operatorname{div} \vec{F} dV.$$

2. Examples p. 1103: #3, 5, 9, 10, 12
3. Examples p. 1108: #27-30, 37, 2-9

Next Time

1. Begin Review for final