

1077-VC-2368 **Todd G Will*** (twill@uwlax.edu), Mathematics Department, University of Wisconsin - La Crosse, 1725 State Street, La Crosse, WI 54601, and **David Finn**. *Search for the Stokes-vergence Theorem*. Preliminary report.

Green's Theorem says that the flow around a region in the plane equals the sum of the curl over the region. We tell our students that Stokes's theorem is a generalization of Green's Theorem to surfaces in space. Green's Theorem for divergence says that the flux out of a region equals the sum of the divergence over the region. If we ask our students to predict a three dimensional generalization we might be hoping for the divergence theorem for solids, but really this seems like too much to expect. Wouldn't they more likely predict a Stokes's like divergence theorem for surfaces? We explore how a student might discover whether such a theorem exists. (Received September 22, 2011)