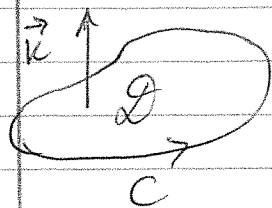


Sec. 16.8. Stokes Theorem

This is a generalization of the Green Thm.

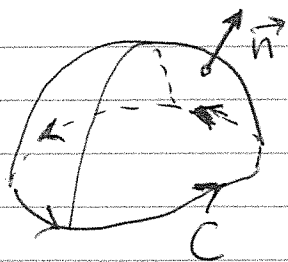
Reminder: Green's Thm.



$$\oint_C \vec{F} \cdot d\vec{r} = \iint_D \underbrace{\left(\frac{\partial Q}{\partial x} - \frac{\partial P}{\partial y} \right)}_{\text{curl } \vec{F} \cdot \vec{k}} \underbrace{dx dy}_{dA}$$

$\uparrow$ curve in 2D $\uparrow$ region in 2D $\nwarrow$ sec. 16.4 p. 32-8

New: Stokes Thm.



$$\oint_C \vec{F} \cdot d\vec{r} = \iint_S \underbrace{\text{curl } \vec{F} \cdot \vec{n}}_{d\vec{S}} dS$$

$\uparrow$ curve in 3D $\uparrow$ surface in 3D $d\vec{S}$ (new notation)

No HW.